

IMPERIAL ROOFING TILES

A SERIES OF
SPECIFICATIONS AND DETAILS FOR
ROOFING TILES

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

CHICAGO
104 SOUTH MICHIGAN AVENUE

NEW YORK
565 FIFTH AVENUE

WASHINGTON
738 FIFTEENTH STREET, N. W.

ROOFING-TILES. CLAY IMPERIAL
LUDOWICI-CELADON COMPANY

A. L. A. FILE NUMBER 12-c1

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ROOFING TILES, CLAY, IMPERIAL
LUDOWICI-CELADON COMPANY

A. L. A. FILE NUMBER 12-1

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Chimney Pots

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

CHIMNEY POTS

Chimney pots are made in various textures and colors especially adapted to use with our weathered effect tiles. They are also available in glazed colors for the modern treatment.



C.P. 200



C.P. 500, 510 and 520



C.P. 600, 610, 620, 630, 640, 650 and 660



C.P. 400, 410 and 420



C.P. 300, 310 and 320

SCHEDULE OF SIZES

NUMBER	FEET	BASE	HEIGHT
C.P. 200	7 1/4 "x7 1/4 "	13 "x13 "	15 "
C.P. 300	8 " Dia.	14 "	18 "
C.P. 310	12 " Dia.	18 "	21 "
C.P. 320	15 " Dia.	21 "	25 "
C.P. 400	8 " Dia.	14 1/2 "	25 "
C.P. 410	12 " Dia.	18 1/2 "	29 "
C.P. 420	15 " Dia.	21 "	32 "
C.P. 500	8 " Dia.	14 "	15 "
C.P. 510	12 " Dia.	18 "	18 "
C.P. 520	15 " Dia.	21 "	22 "
C.P. 600	10 " Dia.	13 "	15 "
C.P. 610	12 " Dia.	15 "	18 "
C.P. 620	15 " Dia.	18 "	20 "
C.P. 630	18 " Dia.	21 "	23 "
C.P. 640	23 " Dia.	26 "	30 "
*C.P. 650	8 "x12 "	11 "x15 "	20 "
*C.P. 660	12 "x15 "	15 "x20 "	30 "

*Elliptical

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

SWEET'S

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

SHINGLE TILES

These patterns are available in a range of colors in a variety of surface textures

SPECIFICATIONS

Note: Notes are explanatory or advisory only and should not be included in the specifications.

Note: Words in italics enclosed within parentheses are selective to suit particular condition. Include or omit as required.

Note: Clauses are selective. Include or omit as they apply.



(1) Tiles

(1a) Cover roofs so indicated with Ludowici-Celadon Company's Imperial (*specify pattern*) Shingle tiles and fittings of (*specify*) color.

(1b) (*Hips*) (*and*) (*valleys*) shall be cut before burning.

(2) Nails

All nails for flashings and tiles shall be copper.

(3) Felt

(3a) Lay asphalt felt weighing 30 lbs. per square, doubled on (*low pitches*) (*rough surfaces*) (*hips*) (*valleys*) (*and*) ridges. Lay parallel to eaves. Lap $2\frac{1}{2}$ " horizontally and 6" vertically. Fasten with large-headed galvanized nails.

(3b) Extend felt (6" up vertical walls) (*and*) 4" over (*gutter*) (*and*) (*valley*) metal.

(4) Wood Strips

(4a) Provide $\frac{3}{4}$ " x 1" cant strips at eaves and 1" stringers of necessary height under (*hip rolls and*) ridges.

(4b) Embed parallel with the pitch on 20" centers 1" x 2" beveled wood strips flush with surface of concrete. Fasten felt with lath nailed over these strips. At right angles to embedded strips, over lath, install 1" x 2" strips spaced to suit tiles.

Note: Include (4b) if roof base is concrete.

(5) Flashings

(5a) At sides of vertical surfaces, insert base flashing between each course of tiles. Lap 3" and extend 4" under tiles and at least 6" up wall.

(5b) At fronts, extend flashing at least 3" up wall and 4" over tiles.

(5c) Masonry wall shall be cap flashed and pointed.

(5d) Where tile and metal roofs intersect, extend metal up tile roof 12" or more.

(5e) Extend gutter metal up roof to a point higher than outer edge of gutter.

(5f) **Open Valleys**—Line valleys with 16 oz. copper at least 20" wide. Turn edge over $\frac{1}{4}$ ". Lap joints at least 4". Fasten with cleats. Do not solder.

(5g) **Closed Valleys**—Flash between each course of tiles with 16" strips of same length as tiles.

(5h) **Rounded Valleys**—Flash between each course of tiles with curved strips of same length as tiles. Extend strips 8" beyond the curve at either side of valley.

(6) Laying

(6a) Lay tiles (*regular*) (*irregular*) with (*specify*) average exposure and not less than 2" head lap on the third course. Double tiles at eave. Fasten with ($1\frac{1}{2}$ " ($1\frac{3}{4}$ ") (*specify*) copper nails. Fasten tiles overlapping sheet metal with copper wire and elastic cement.

Note: Select whether regular or irregular and specify $1\frac{1}{2}$ " nails for $\frac{3}{8}$ " shingles; $1\frac{3}{4}$ " nails for $\frac{1}{2}$ " shingles; longer for thicker shingles.

(6b) Leave opening of 6" or more across valleys.

(6c) Cement end bands in laps.

(6d) Cement hip rolls in laps and fasten with 2" copper nails.

(6e) Cement ridges in laps and fasten with $2\frac{1}{2}$ " copper nails.

(6f) Where tiles join hip stringers make waterproof with elastic cement.

(6g) Cement small pieces of graduated tiles solidly with elastic cement.

Note: Include (6g) on circular roofs.

(6h) Cement all tiles in laps, using 30 lbs. of elastic cement per square.

Note: Include (6h) on high buildings.

Details concerning any roofing problem furnished on request.
If additional copies of this catalogue are desired, please write.

IMPERIAL SHINGLE TILES



Length.....	15 "
Width.....	7 "
Thickness.....	$1\frac{1}{2}$ "
Average exposure.....	$7\frac{1}{2} \times 6\frac{1}{2}$ "
Average pieces per square.....	317
Average weight per square.....	1230 lbs.



Length.....	12 "
Width.....	7 "
Thickness.....	$\frac{5}{8}$ "
Average exposure.....	$7\frac{1}{2} \times 5\frac{1}{2}$ "
Average pieces per square.....	412
Average weight per square.....	1840 lbs.

BRITTANY

IMPERIAL SHINGLE TILES



ANTIQUE

Length	12 "
Width	7 "
Thickness	$\frac{16}{8}$ "
Average exposure	7"x5"
Average pieces per square	412
Average weight per square	1600 lbs.



Length	12 "
Width	$6\frac{1}{4}$ "
Thickness	$\frac{5}{8}$ "
Average exposure	$6\frac{1}{4}$ "x5"
Average pieces per square	460
Average weight per square	1850 lbs.

CRUDE

IMPERIAL SHINGLE TILES

COLONIAL

IMPERIAL SHINGLE TILES



COLONIAL	
Length.....	15"
Width.....	7 3/8"
Thickness.....	5/8"
Average exposure.....	7 3/8" x 6 1/2"
Average pieces per square.....	300
Average weight per square.....	1675 lbs.



YALE MEMORIAL	
Lengths.....	12", 14", 16"
Widths.....	6", 7", 8"
Thicknesses.....	5/8", 3/4", 1"

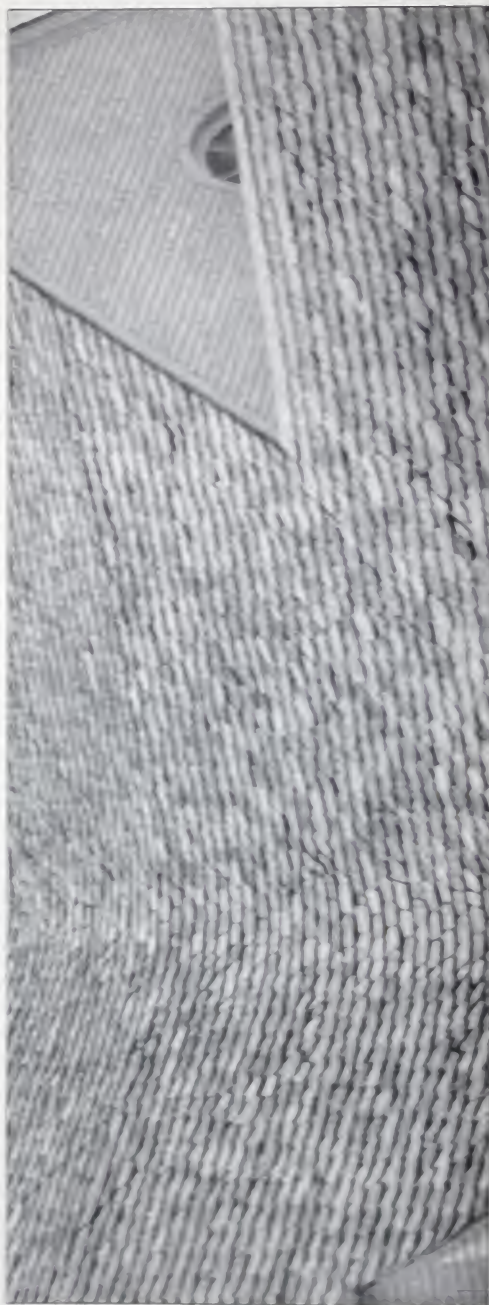
IMPERIAL SHINGLE TILES



Build any Shingle Tiles



Roll Ridge



Yale Memorial Tiles



Spocket hip roll

DETAILS OF IMPERIAL $\frac{3}{8}$ " FLAT AND $\frac{5}{8}$ " SLAB SHINGLE TILES AND FITTINGS

SCALE $1\frac{1}{2}" = 1'-0"$

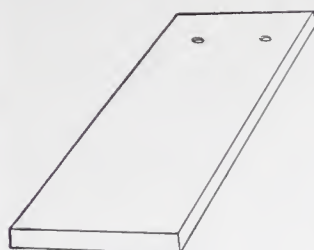
IMPORTANT DATA

$\frac{3}{8}$ " FLAT SHINGLE TILES

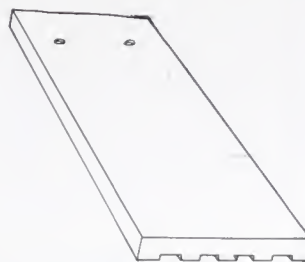
Length.....12"
Width.....6"
Average exposure.....6"x5"
Average pieces per square.....480
Average weight per square.1225 lbs.

$\frac{5}{8}$ " SLAB SHINGLE TILES

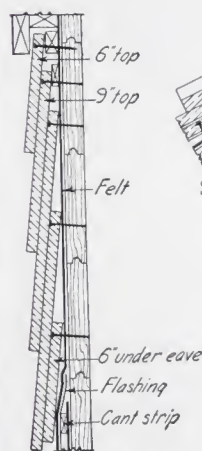
Length.....12"
Width.....6"
Average exposure.....6"x5"
Average pieces per square.....461
Average weight per square.1780 lbs.



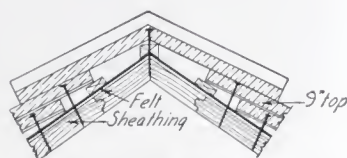
$\frac{3}{8}$ " Flat Shingle Tile.



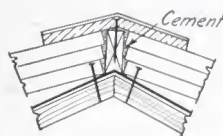
$\frac{5}{8}$ " Slab Shingle Tile.



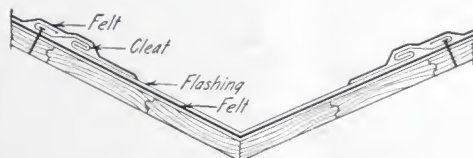
Section A-A.



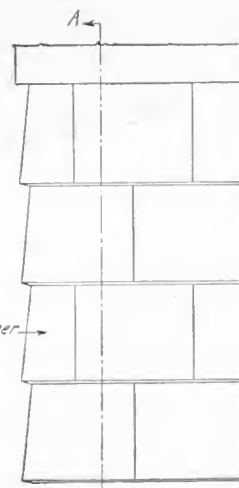
Section showing No. 203 ridge.



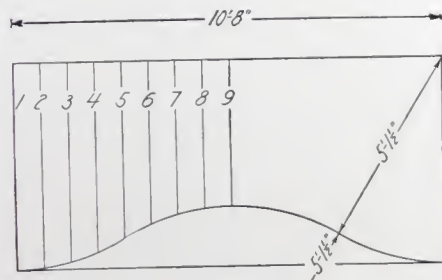
Hip section showing
No. 111 Hip roll.



Cross section showing valley flashing
on wood roof base. See specifications.

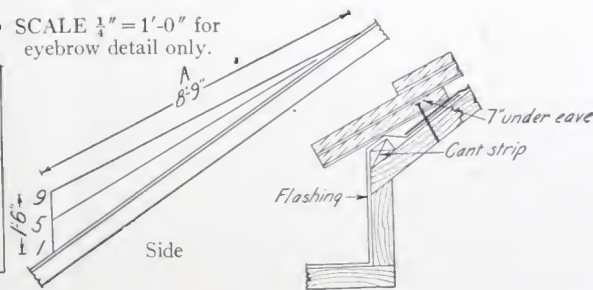


Elevation showing $\frac{3}{8}$ "
Flat Shingle Tiles.



Front

SCALE $\frac{1}{4}" = 1'-0"$ for
eyebrow detail only.



Eave section showing gutter construction.

Eyebrow dormers must be constructed as shown above for $\frac{5}{8}$ " Slab Shingle Tiles. Rafters and sheathing must show a straight line from the curved eave to the point directly above where it joins main roof and on a line with the point where center line of eyebrow meets main roof. See front elevation.

Larger or smaller effects can be secured providing

vertical height and radius shown are increased or decreased proportionately. Distance "A" should not be decreased and it must be increased when roof pitch is steeper than 12" rise in 12" run.

Crowd tiles at top of dormer and spread them at eave. Shorten exposure of tiles as they leave main roof until tail lines of tiles on both surfaces are aligned.

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

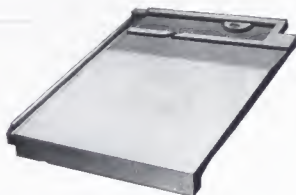
CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

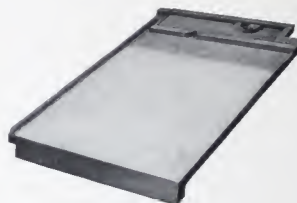
WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

INTERLOCKING SHINGLE TILES



CLOSED SHINGLE



ENGLISH SHINGLE

These patterns are available in a range of colors in a variety of surface textures.

SPECIFICATIONS

Note: Notes are explanatory or advisory only and should not be included in the specifications.

Note: Words in italics enclosed within parentheses are selective to suit particular condition. Include or omit as required.

Note: Clauses are selective. Include or omit as they apply.

(1) Tiles

(1a) Cover roofs so indicated with Ludowici-Celadon Company's Imperial (Closed) (English) Shingle tiles and fittings of (*specify*) color.

(1b) (*Hips*) (*and*) (*valleys*) shall be cut before burning.

(2) Nails

All nails for flashings and tiles shall be copper.

(3) Felt

(3a) Lay asphalt felt weighing 30 lbs. per square, doubled on (*low pitches*) (*rough surfaces*) (*hips*) (*valleys*) (*and*) ridges. Lay parallel to eaves. Lap $2\frac{1}{2}$ " horizontally and 6" vertically. Fasten with large-headed galvanized nails.

(3b) Extend felt (6" up vertical walls) (*and*) 4" over (*gutter*) (*and*) (*valley*) metal.

(4) Wood Strips

(4a) Provide $\frac{3}{4}$ " x 1" cant strips at eaves.

Note: Include (4a) if English Shingles are specified.

(4b) Provide 1" stringers of necessary height under (*hip rolls* *and*) ridges.

(4c) Embed parallel with the pitch on 20" centers 1" x 2" beveled wood strips flush with surface of concrete. Fasten felt with lath nailed over these strips. At right angles to embedded strips, over lath, install 1" x 2" strips spaced to suit tiles.

Note: Include (4c) if roof base is concrete.

(5) Flashings

(5a) Line valleys with 16 oz. copper at least 20" wide. Turn edge over $\frac{1}{4}$ ". Lap joints at least 4". Fasten with cleats. Do not solder.

(5b) At sides of vertical surfaces, extend base flashing at least 6" up wall, 5" under tiles and turn up edge $\frac{1}{4}$ ".

(5c) At fronts, extend flashing at least 3" up wall and 4" over tiles.

(5d) Masonry wall shall be cap flashed and pointed.

(5e) Where tile and metal roofs intersect, extend metal up tile roof 12" or more.

(5f) Extend gutter metal up roof to a point higher than outer edge of gutter.

(6) Laying

(6a) Lay tiles to straight lines, parallel and at right angles to eaves, lapped 3". Fasten with 2" copper nails. Fasten tiles overlapping sheet metal with copper wire and elastic cement.

(6b) Leave opening of 6" or more across valleys.

(6c) Cement gable rakes to field tiles and fasten with 2" copper nails.

(6d) Cement hip rolls in laps and fasten with 2" copper nails.

(6e) Cement ridges in laps and fasten with $2\frac{1}{2}$ " copper nails.

(6f) Where tiles join hip stringers make waterproof with elastic cement.

(6g) Cement small pieces of graduated tiles solidly with elastic cement.

Note: Include (6g) on circular roofs.

(6h) Cement all tiles in laps, using 30 lbs. of elastic cement per square.

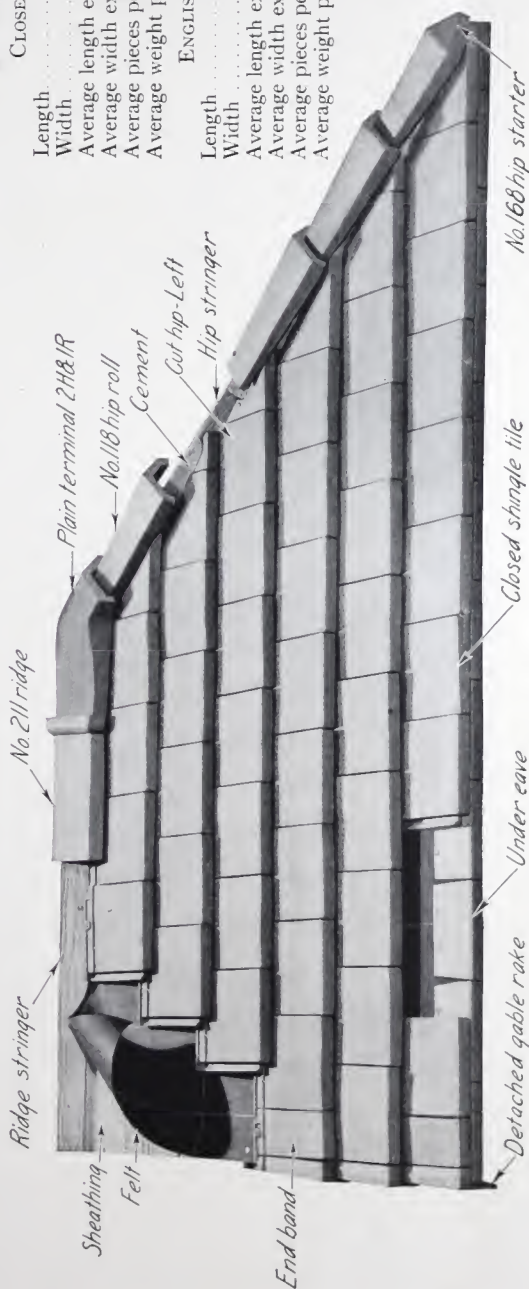
Note: Include (6h) on high buildings.

Details concerning any roofing problem furnished on request.

If additional copies of this catalogue are desired, please write.

IMPORTANT DATA

CLOSED SHINGLE	
Length.....	11 ⁰
Width.....	8 ³ / ₄ ⁰
Average length exposure.....	8 ⁰
Average width exposure.....	8 ⁰
Average pieces per square.....	225
Average weight per square.....	900 lbs.
ENGLISH SHINGLE	
Length.....	13 ¹ / ₂ ⁰
Width.....	8 ³ / ₄ ⁰
Average length exposure.....	10 ⁰
Average width exposure.....	7 ³ / ₄ ⁰
Average pieces per square.....	182
Average weight per square.....	900 lbs.



HIP AND RIDGE STRINGER HEIGHTS

Roof Pitch		CLOSED SINGLE		ENGLISH SINGLE	
		Hip No. 118.	Ridge No. 211.	Hip No. 120.	Ridge No. 211.
4"	Rise to 12" Run	27"	31"	21"	3"
5"	Rise to 12" Run	28"	29"	21"	21"
6"	Rise to 12" Run	27"	25"	31"	21"
7"	Rise to 12" Run	28"	27"	31"	21"
8"	Rise to 12" Run	23"	21"	31"	2"
9"	Rise to 12" Run	24"	17"	3"	14"
10"	Rise to 12" Run	23"	15"	3"	14"
11"	Rise to 12" Run	25"	13"	3"	11"
12"	Rise to 12" Run	28"	11"	3"	11"
13"	Rise to 12" Run	25"	7"	27"	1"
14"	Rise to 12" Run	24"	8"	28"	36"
		24"	8"	28"	3"

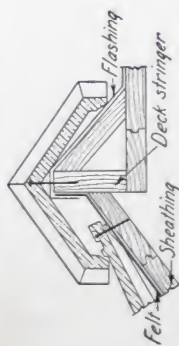
CORRECT RAFTER LENGTHS FOR FULL LENGTH TILES

Based on 2" projection at eave of roof.

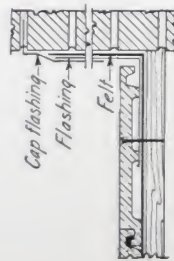
COURSE	CLOSED	SINGLE	ENGLISH SINGLE
1	9 ^h	11 ^h	11 ^h
2	17 ^h	21 ^h	21 ^h
3	25 ^h	31 ^h	31 ^h
4	33 ^h	41 ^h	41 ^h
5	41 ^h	51 ^h	51 ^h
6	49 ^h	61 ^h	61 ^h
7	57 ^h	72 ^h	72 ^h
8	65 ^h	82 ^h	82 ^h
9	73 ^h	92 ^h	92 ^h
10	81 ^h	102 ^h	102 ^h
11	89 ^h	112 ^h	112 ^h

DETAILS OF IMPERIAL INTERLOCKING SHINGLE TILES AND FITTINGS

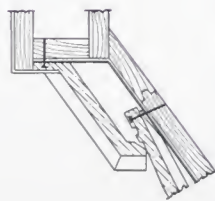
SCALE $1\frac{1}{2}" = 1'-0"$



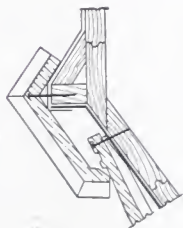
Deck section showing
No. 211 ridge.



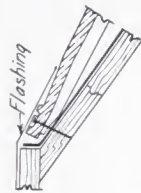
Section showing flashing
under side of tiles.



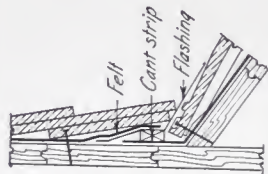
Deck section showing
No. 211 deck
mould-raised flange.



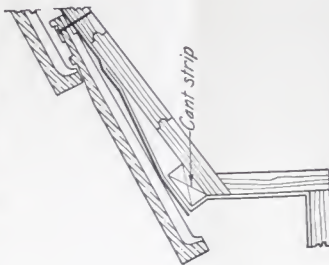
Deck section showing
No. 211 cut-off
ridge.



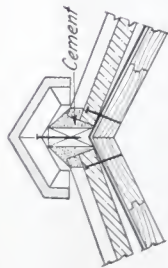
Deck section showing
flashing over top
of tiles.



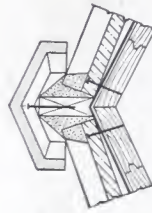
Section showing flashing
under $\frac{3}{8}"$ Flat Shingle Tiles.



Section showing gutter
construction for English
Shingle Tiles.



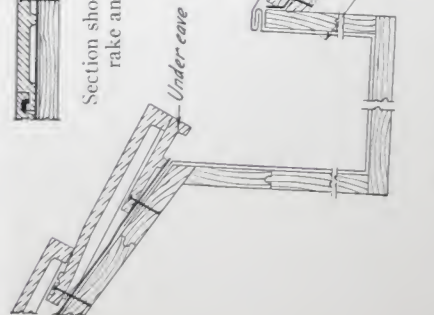
Hip section showing No. 118
hip roll used with Closed
Shingle Tiles.



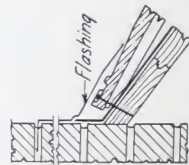
Hip section showing No. 120
hip roll used with English
Shingle Tiles.



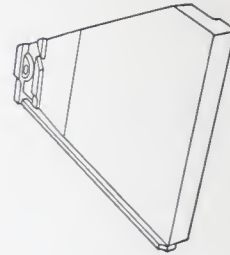
Section showing right gable
rake and end band.



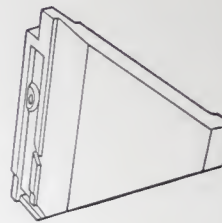
Section showing sunken gutter treatment.
NOTE: When English Shingle Tiles are used, under eaves are
omitted and distance below gutter is $11\frac{1}{4}"$.



Section showing flashing
over top of tiles.



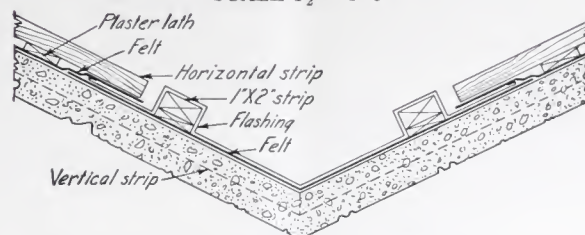
Cut hip—Left.



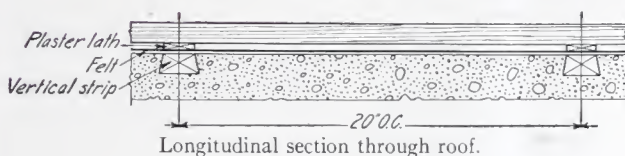
Cut valley—Right.

DETAILS OF IMPERIAL INTERLOCKING SHINGLE TILES AND FITTINGS

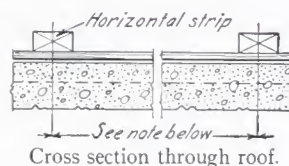
APPLICATION OVER CONCRETE

SCALE $1\frac{1}{2}" = 1'-0"$ 

Section showing valley flashing on concrete roof base.



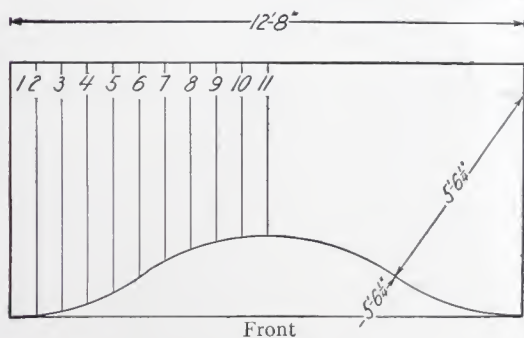
Longitudinal section through roof.



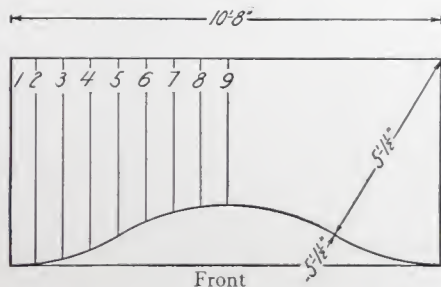
Cross section through roof.

Application of wood strips to concrete roof base.
Exact spacing of horizontal strips determined by shade of tiles.

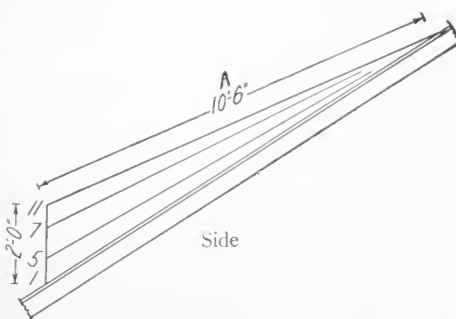
DIAGRAM OF EYEBROW DORMERS

SCALE $\frac{1}{4}" = 1'-0"$ 

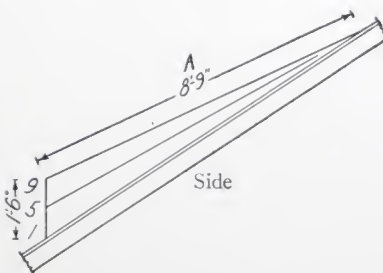
Front



Front



Side



Side

Eyebrow dormers must be constructed as shown above for Closed Shingle Tiles. Rafters and sheathing must show a straight line from the curved eave to the point directly above where it joins main roof and on a line with the point where center line of eyebrow meets main roof. See front elevation.

Larger or smaller effects can be secured providing

vertical height and radii shown are increased or decreased proportionately. Distance "A" should not be decreased and it must be increased when roof pitch is steeper than 12" rise in 12" run.

NOTE: For English Shingle tiles, eyebrow width and distance "A" must be increased 2'-0". The height remains the same.

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

FRENCH TILES

This pattern is available in a range of colors

SPECIFICATIONS

Note: Notes are explanatory or advisory only and should not be included in the specifications.

Note: Words in italics enclosed within parentheses are selective to suit particular condition. Include or omit as required.

Note: Clauses are selective. Include or omit as they apply.



(1) Tiles

(1a) Cover roofs so indicated with Ludowici-Celadon Company's Imperial French tiles and fittings of (specify) color.

(1b) (*Hips*) (*and*) (*valleys*) shall be cut before burning.

(2) Nails

All nails for flashings and tiles shall be copper.

(3) Felt

(3a) Lay asphalt felt weighing 30 lbs. per square, doubled on (*low pitches*) (*rough surfaces*) (*hips*) (*valleys*) (*and*) ridges. Lay parallel to eaves. Lap $2\frac{1}{2}$ " horizontally and 6" vertically. Fasten with large-headed galvanized nails.

(3b) Extend felt (6" up vertical walls) (*and*) 4" over (*gutter*) (*and*) (*valley*) metal.

(4) Wood Strips

(4a) Provide $1\frac{1}{2}$ " x 2" cant strips at eaves and 1" stringers of necessary height under (*hip rolls and*) ridges.

(4b) Embed parallel with the pitch on 20" centers $1\frac{1}{2}$ " x 2" beveled wood strips flush with surface of concrete. Fasten felt with lath nailed over these strips. At right angles to embedded strips, over lath, install $1\frac{1}{2}$ " x 2" strips spaced to suit tiles.

Note: Include (4b) if roof base is concrete.

(5) Flashings

(5a) Line valleys with 16 oz. copper at least 20" wide. Turn edge over $\frac{1}{4}$ ". Lap joints at least 4". Fasten with cleats. Do not solder.

(5b) At sides of vertical surfaces, extend base flashing at least 6" up wall, 5" under tiles and turn up edge $\frac{1}{4}$ ".

(5c) At fronts, extend flashing at least 3" up wall and 4" over tiles.

(5d) Masonry wall shall be cap flashed and pointed.

(5e) Where tile and metal roofs intersect, extend metal up tile roof 12" or more.

(5f) Extend gutter metal up roof to a point higher than outer edge of gutter.

(6) Laying

(6a) Lay tiles to straight lines, parallel and at right angles to eaves, lapped 3". Fasten with $2\frac{1}{4}$ " copper nails. Fasten tiles overlapping sheet metal with copper wire and elastic cement.

(6b) Leave opening of 6" or more across valleys.

(6c) Cement gable rakes to field tiles and fasten with 2" copper nails.

(6d) Cement hip rolls in laps and fasten with 2" copper nails.

(6e) Cement ridges in laps and fasten with $2\frac{1}{4}$ " copper nails.

(6f) Where tiles join hip stringers make waterproof with elastic cement.

(6g) Cement small pieces of graduated tiles solidly with elastic cement.

Note: Include (6g) on circular roofs.

(6h) Cement all tiles in laps, using 40 lbs. of elastic cement per square.

(6i) Copper clamp shall be placed in side lock of each tile at point directly above head of tile below. Nail clamp to roof base.

Note: Include either (6h) or (6i) on high buildings.

*Details concerning any roofing problem furnished on request.
If additional copies of this catalogue are desired, please write.*

DETAILS OF IMPERIAL FRENCH TILES

IMPORTANT DATA

Length	16 1/2"
Width	9"
Average length exposure	13 3/8"
Average width exposure	8 1/8"
Average pieces per square	133
Average weight per square	935 lbs.



CORRECT RAFTER LENGTHS FOR FULL LENGTH TILES

Based on 2" projection at eave of roof

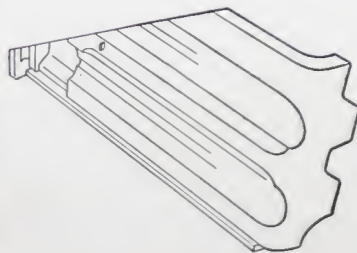
COLLAR	RAFTER
1	14"
2	27"
3	40"
4	53"
5	66"
6	79"
7	92"
8	105"
9	118"
10	131"

HIP AND RIDGE STRINGER HEIGHTS

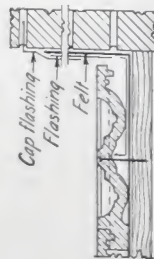
ROOF PITCH	HIP NO. 102	RIDGE NO. 206
4" Rise to 12" Run	4"	5 1/2"
5" Rise to 12" Run	4"	5"
6" Rise to 12" Run	4"	4 1/2"
7" Rise to 12" Run	4"	4 1/4"
8" Rise to 12" Run	4"	4 1/8"
9" Rise to 12" Run	4"	4"
10" Rise to 12" Run	4"	3 3/4"
11" Rise to 12" Run	4"	3 1/2"
12" Rise to 12" Run	4"	3 1/4"
13" Rise to 12" Run	4"	3"
14" Rise to 12" Run	4"	2 1/2"
15" Rise to 12" Run	4"	2 1/8"

DETAILS OF IMPERIAL FRENCH TILES AND FITTINGS

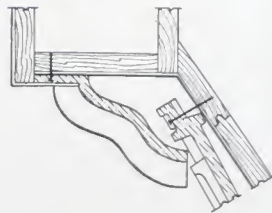
SCALE $1\frac{1}{2}" = 1'-0"$



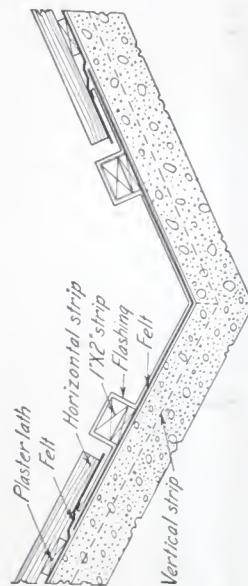
Cut hip—Left.



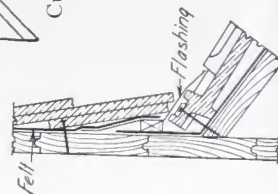
Section showing flashing under side of tiles.



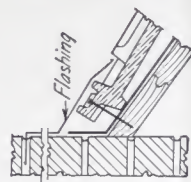
Deck section showing No. 206 deck mould-raised flange.



Section showing valley flashing on concrete roof base.



Section showing flashing under $\frac{3}{8}"$ Flat Shingle Tiles.



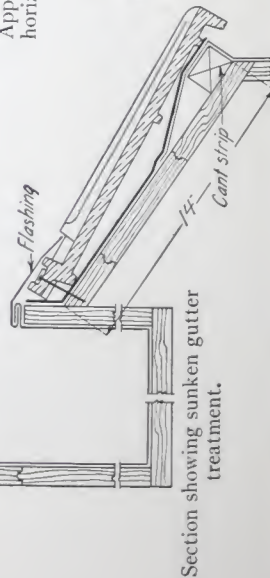
Cut valley—Right.



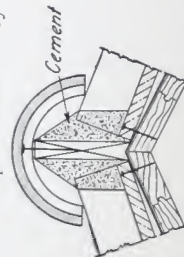
Section showing right gable rake.



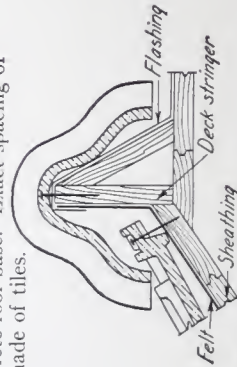
Longitudinal section through roof. Application of wood strips to concrete roof base. Exact spacing of horizontal strips determined by shade of tiles.



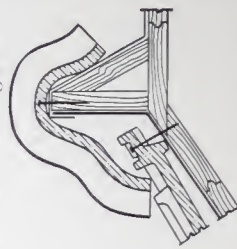
Section showing sunken gutter treatment.



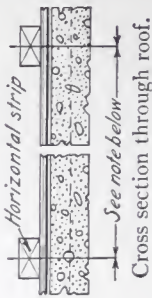
Hip section showing No. 102 hip roll.



Deck section showing No. 206 ridge.



Deck section showing No. 206 cut-off ridge.



Cross section through roof. See note below.

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

TILE SLABS



In addition to shale red colors, tile slabs are manufactured in a range of browns and fire-flashed shades. A complete line of tile slab fittings is available.

NUMBER OF PIECES PER SQUARE

Mortar Joint	6"x6"x1"	6"x9"x1"	9"x9"x1"
1/4"	364	238	173
3/8"	369	250	168
1/2"	373	261	164
5/8"	377	274	160



6"x9"x1"



6"x6"x1"



GARDEN WALK EDGING

Made in red, fire-flashed and black. Placed in the ground along walks or driveways it makes an interesting and practical edging for lawns or flower borders.

TILE FLAGGING

Made in a variety of colors. The texture suggests that of old stone flagging. Size approximately 9"x12"x1 1/4".



LUDOWICI-CELADON COMPANY

Makers of *IMPERIAL Roofing Tiles*

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

MISSION TILES

These patterns are available in a range of colors in a variety of surface textures

SPECIFICATIONS

Note: Notes are explanatory or advisory only and should not be included in the specifications.

Note: Words in italics enclosed within parentheses are selective to suit particular condition. Include or omit as required.

Note: Clauses are selective. Include or omit as they apply.



(1) Tiles

(1a) Cover roofs so indicated with Ludowici-Celadon Company's Imperial (*specify pattern*) Mission Tiles and fittings of (*specify*) color.

(1b) Covers shall be used as (*hip roll and*) ridge.

(1c) (*Hips shall be cut*) (*and*) valleys shall be cut and closed before burning.

(2) Nails

All nails for flashings and tiles shall be copper.

(3) Felt

(3a) Lay asphalt felt weighing 30 lbs. per square, doubled on (*low pitches*) (*rough surfaces*) (*hips*) (*valleys*) (*and*) ridges. Lay parallel to eaves. Lap $2\frac{1}{2}$ " horizontally and 6" vertically. Fasten with large-headed galvanized nails.

(3b) Extend felt (6" up vertical walls) (*and*) 4" over (*gutter*) (*and*) (*valley*) metal.

(4) Wood Strips

(4a) Provide 1" strips of necessary height under covers (*hip rolls*) and ridges.

(4b) Embed parallel with the pitch on 20" centers 1" x 2" beveled wood strips flush with surface of concrete. Fasten felt with lath nailed over these strips. At right angles to embedded strips, over lath, install 1" x 2" strips spaced to suit pan tiles.

Note: Include (4b) if roof base is concrete.

(5) Flashings

(5a) Line valleys with 16 oz. copper at least 20" wide. Turn edge over $\frac{1}{4}$ ". Lap joints at least 4". Fasten with cleats. Do not solder.

(5b) At sides of vertical surfaces, extend base flashing at least 6" up wall, 4" under tiles and turn up edge 2".

(5c) At fronts, extend flashing at least 3" up wall and 4" over tiles.

(5d) Masonry wall shall be cap flashed and pointed.

(5e) Where tile and metal roofs intersect, extend metal up tile roof 12" or more.

(5f) Extend gutter metal up roof to a point higher than outer edge of gutter.

(6) Laying

(6a) Lay tiles (*regular*) (*irregular*) exposure with not less than 3" lap. Fasten with 2" copper nails. Fasten tiles overlapping sheet metal with copper wire and elastic cement.

(6b) **Irregular Effect**—Lay pans at actual exposure. Vary exposures of covers to avoid horizontal and diagonal lines using 10% additional covers.

(6c) Leave opening of 6" or more across valleys.

(6d) Cement gable rakes to field tiles and fasten with $2\frac{1}{4}$ " copper nails.

(6e) Cement (*hip rolls*) (*and*) (*ridges*) in laps and fasten with $2\frac{1}{4}$ " copper nails.

(6f) Where tiles join hip stringers make waterproof with elastic cement.

(6g) Cement small pieces of graduated tiles solidly with elastic cement.

Note: Include (6g) on circular roofs.

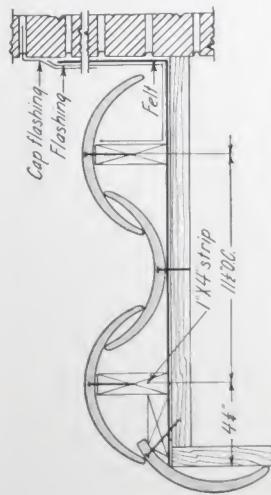
(6h) Cement all tiles in laps, using 30 lbs. of elastic cement per square.

Note: Include (6h) on high buildings.

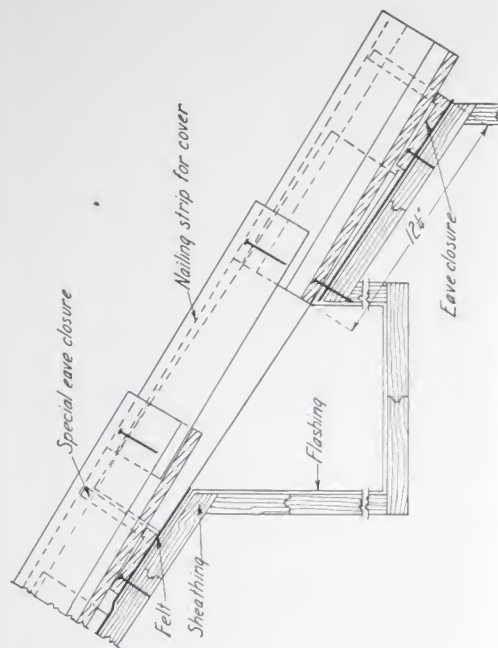
Details concerning any roofing problem furnished on request.

If additional copies of this catalogue are desired, please write.

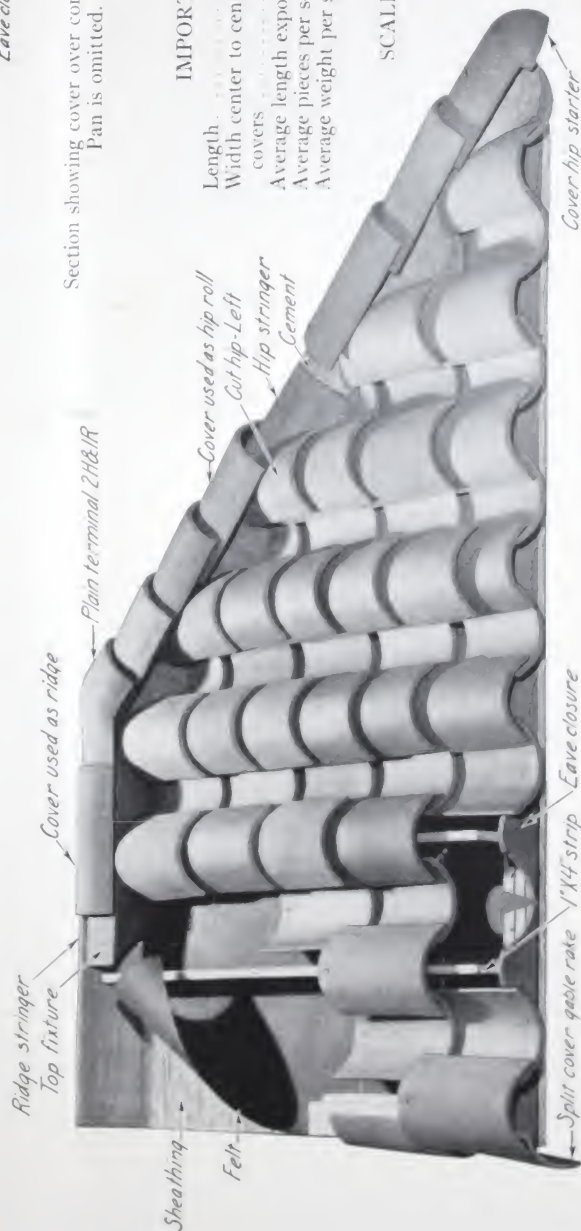
DETAILS OF IMPERIAL STRAIGHT BARREL MISSION TILES AND FITTINGS



Section showing split cover gable rake also flashing under side of tiles.



Section showing cover over concealed gutter.
Pan is omitted.

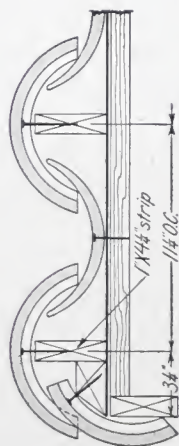


IMPORTANT DATA

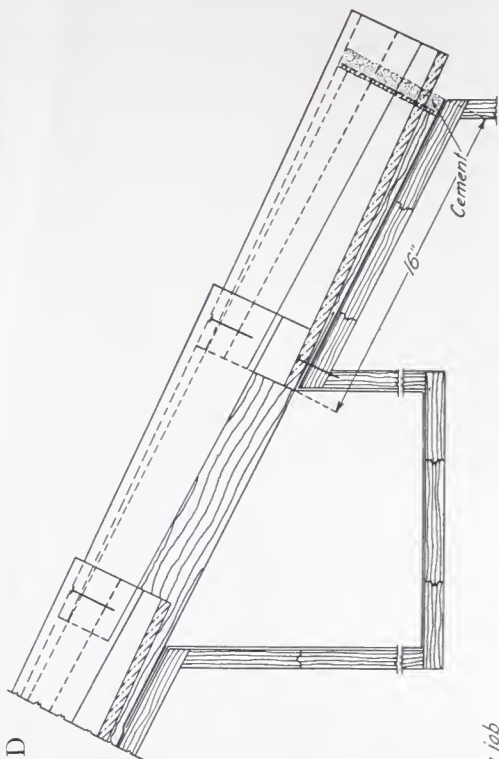
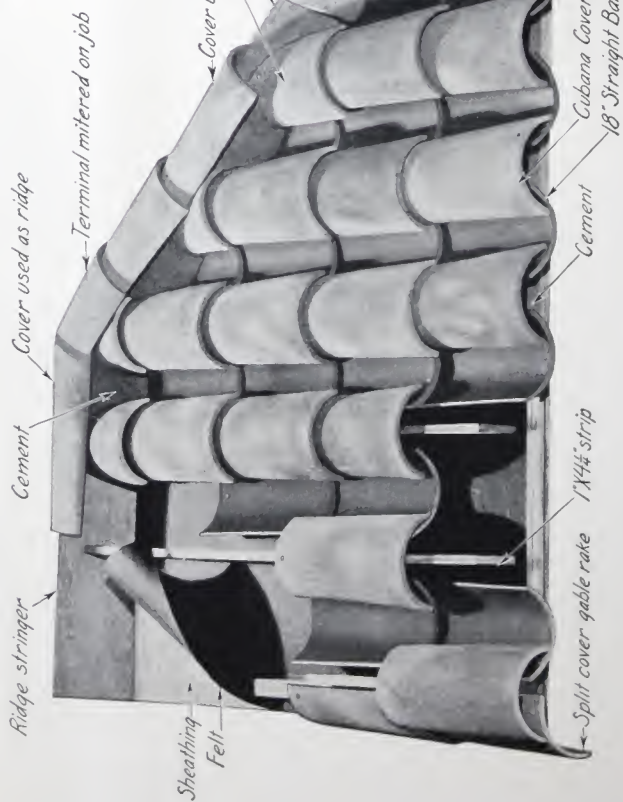
Length	14 1/4"	18"
Width center to center of covers	11 1/2"	11 1/2"
Average length exposure	11 1/4"	15"
Average pieces per square	224	170
Average weight per square	1250 lbs.	1250 lbs.

SCALE 1 1/2" = 1'-0"

DETAILS OF IMPERIAL 18" CUBANA TAPERED MISSION TILES AND FITTINGS



Section showing split cover gable rake.



Section showing cover over concealed gutter. Pan is omitted.

IMPORTANT DATA

Length, pan	18 "
Length, cover	18 "
Width center to center of covers	11 1/4 "
Average length exposure, pans	15 "
Average length exposure, covers	15 "
Average pieces per square, pans	85
Average weight per square, covers	1265 lbs.

Note: 18" Straight Barrel pans furnished with this pattern.

SCALE 1 1/2" = 1'-0"

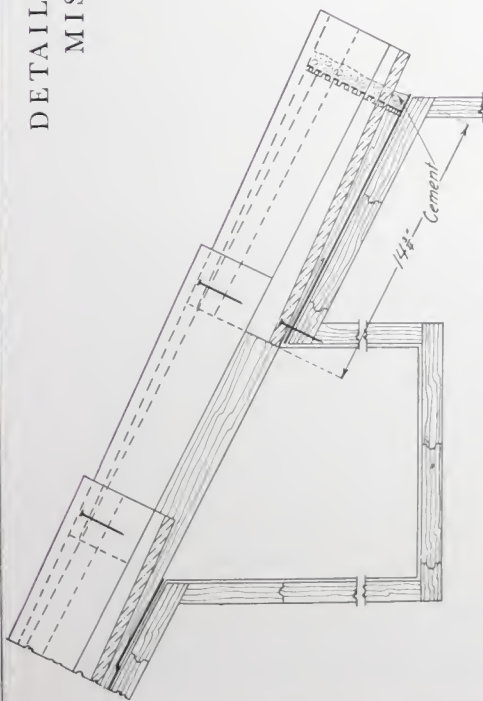
DETAILS OF IMPERIAL LARGE TAPERED MISSION TILES AND FITTINGS

IMPORTANT DATA LARGE TAPERED PANS AND COVERS

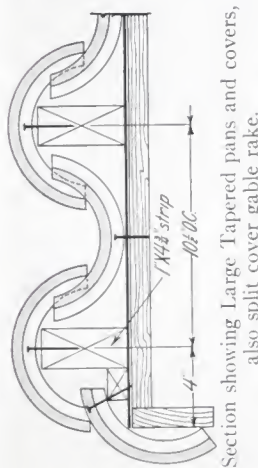
Length.....	16 3/4"
Width center to center of covers.....	10 1/2"
Average length exposure, pans.....	13 3/4"
Average pieces per square.....	200
Average weight per square.....	1600 lbs.

Length, pan.....	18"
Length, cover.....	16 3/4"
Width center to center of covers.....	11"
Average length exposure, pans.....	15"
Average length exposure, covers.....	13 3/4"
Average pieces per square, pans.....	87
Average pieces per square, covers.....	95
Average weight per square.....	1400 lbs.

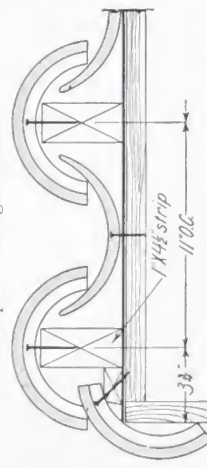
SCALE 1 1/2" = 1'-0"



Section showing cover over concealed gutter. Pan is omitted.
NOTE: When 18" Straight Barrel pans are used, distance below gutter should be 16".



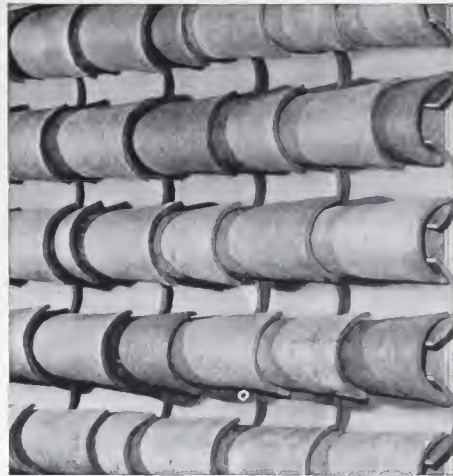
Section showing Large Tapered pans and covers,
also split cover gable rake.



Section showing Large Tapered covers with 18"
Straight Barrel pans, also split cover gable rake.



Large Tapered pans and covers.



Large Tapered covers and Straight Barrel pans.

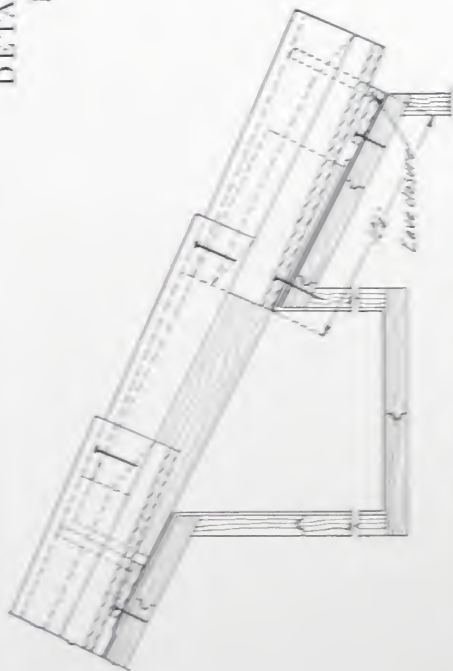
DETAILS OF IMPERIAL SMALL TAPERED MISSION TILES AND FITTINGS

IMPORTANT DATA SMALL TAPERED PANS AND COVERS

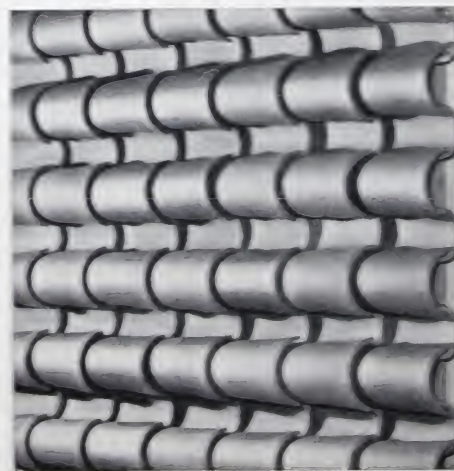
Length	14 1/2"
Width center to center of covers	9 1/2"
Average length exposure	11 1/2"
Average pieces per square	270
Average weight per square	1480 lbs.

Length, pan	14 1/2"
Length, cover	14 1/2"
Width center to center of covers	10 1/2"
Average length exposure, pans	11 1/2"
Average length exposure, covers	11 1/2"
Average pieces per square, pans	128
Average pieces per square, covers	128
Average weight per square	1450 lbs.

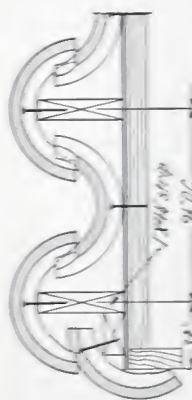
Section showing cover over concealed gutter. Pan is omitted.



SCALE 1 1/2" = 1'-0"



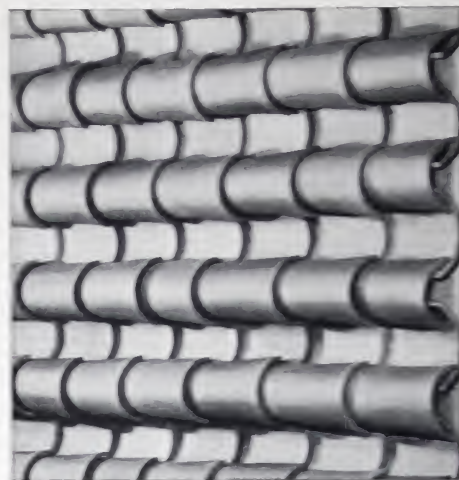
Small Tapered pans and covers.



Section showing Small Tapered pans and covers, also split cover gable rake.



Section showing Small Tapered covers with 14 1/2" Straight Barrel pans, also split cover gable rake.



Small Tapered covers and Straight Barrel pans.

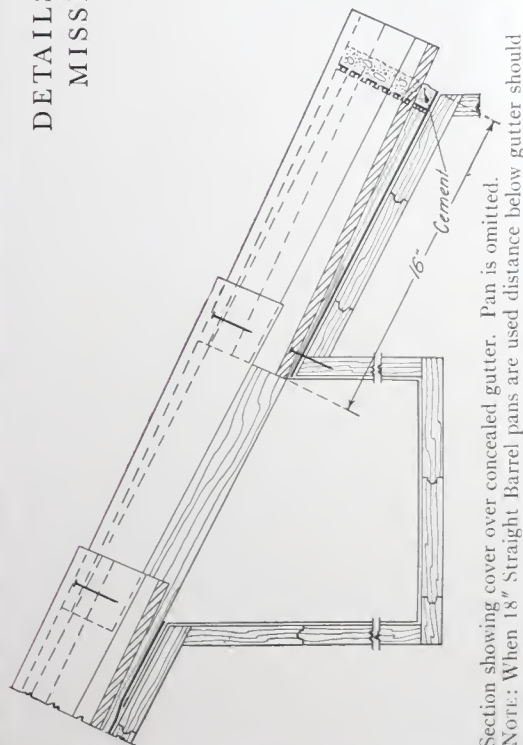
DETAILS OF IMPERIAL 18" TAPERED MISSION TILES AND FITTINGS

IMPORTANT DATA

18" TAPERED PANS AND COVERS	
Length.....	18"
Width center to center of covers.....	9½"
Average length exposure.....	15"
Average pieces per square.....	204
Average weight per square.....	1600 lbs.

18" TAPERED COVERS AND 18" STRAIGHT BARREL PANS	
Length, pan.....	18"
Length, cover.....	18"
Width center to center of covers.....	10"
Average length exposure, pans.....	15"
Average length exposure, covers.....	15"
Average pieces per square, pans.....	96
Average pieces per square, covers.....	1350 lbs.

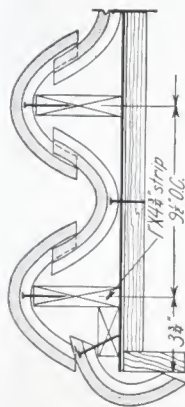
SCALE 1½" = 1'-0"



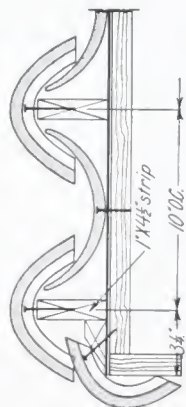
Section showing cover over concealed gutter. Pan is omitted.
Note: When 18" Straight Barrel pans are used distance below gutter should be 16".



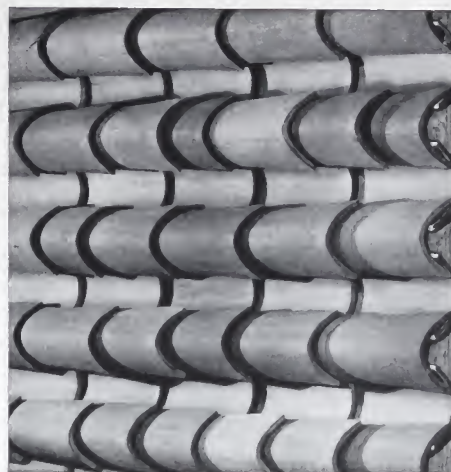
18" Tapered pans and covers.



Section showing 18" Tapered pans and covers, also split cover gable rake.



Section showing 18" Tapered covers and 18" Straight Barrel pans, also split cover gable rake.



18" Tapered covers and Straight Barrel pans.

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

SPANISH TILES

This pattern is available in a range of colors in a variety of surface textures

SPECIFICATIONS

Note: Notes are explanatory or advisory only and should not be included in the specifications.

Note: Words in italics enclosed within parentheses are selective to suit particular condition. Include or omit as required.

Note: Clauses are selective. Include or omit as they apply.



(1) Tiles

(1a) Cover roofs so indicated with Ludowici-Celadon Company's Imperial Spanish tiles and fittings of (*specify*) color.

(1b) (*Hips shall be cut*) (*and*) valleys shall be cut and closed before burning.

(2) Nails

All nails for flashings and tiles shall be copper.

(3) Felt

(3a) Lay asphalt felt weighing 30 lbs. per square, doubled on (*low pitches*) (*rough surfaces*) (*hips*) (*valleys*) (*and*) ridges. Lay parallel to eaves. Lap $2\frac{1}{2}$ " horizontally and 6" vertically. Fasten with large-headed galvanized nails.

(3b) Extend felt (6" up vertical walls) (*and*) 4" over (*gutter*) (*and*) (*valley*) metal.

(4) Wood Strips

(4a) Provide 1" x 2" strips under end bands and 1" stringers of necessary height under (*hip rolls and*) ridges.

(4b) Embed parallel with the pitch on 20" centers 1" x 2" beveled wood strips flush with surface of concrete. Fasten felt with lath nailed over these strips. At right angles to embedded strips, over lath, install 1" x 2" strips spaced to suit tiles.

Note: Include (4b) if roof base is concrete.

(5) Flashings

(5a) Line valleys with 16 oz. copper at least 20" wide. Turn edge over $\frac{1}{4}$ ". Lap joints at least 4". Fasten with cleats. Do not solder.

(5b) At sides of vertical surfaces, extend base flashing at least 6" up wall, 4" under tiles and turn up edge $1\frac{1}{2}$ ".

(5c) At fronts, extend flashing at least 3" up wall and 4" over tiles.

(5d) Masonry wall shall be cap flashed and pointed.

(5e) Where tile and metal roofs intersect, extend metal up tile roof 12" or more.

(5f) Extend gutter metal up roof to a point higher than outer edge of gutter.

(6) Laying

(6a) Lay tiles to straight lines, parallel and at right angles to eaves, lapped 3". Fasten with $1\frac{1}{4}$ " copper nails. Fasten tiles overlapping sheet metal with copper wire and elastic cement.

(6b) Leave opening of 6" or more across valleys.

(6c) Cement gable rakes to field tiles and fasten with $2\frac{1}{2}$ " copper nails.

(6d) Cement hip rolls in laps and fasten with 2" copper nails.

(6e) Cement ridges in laps and fasten with $2\frac{1}{2}$ " copper nails.

(6f) Where tiles join hip stringers make waterproof with elastic cement.

(6g) Cement small pieces of graduated tiles solidly with elastic cement.

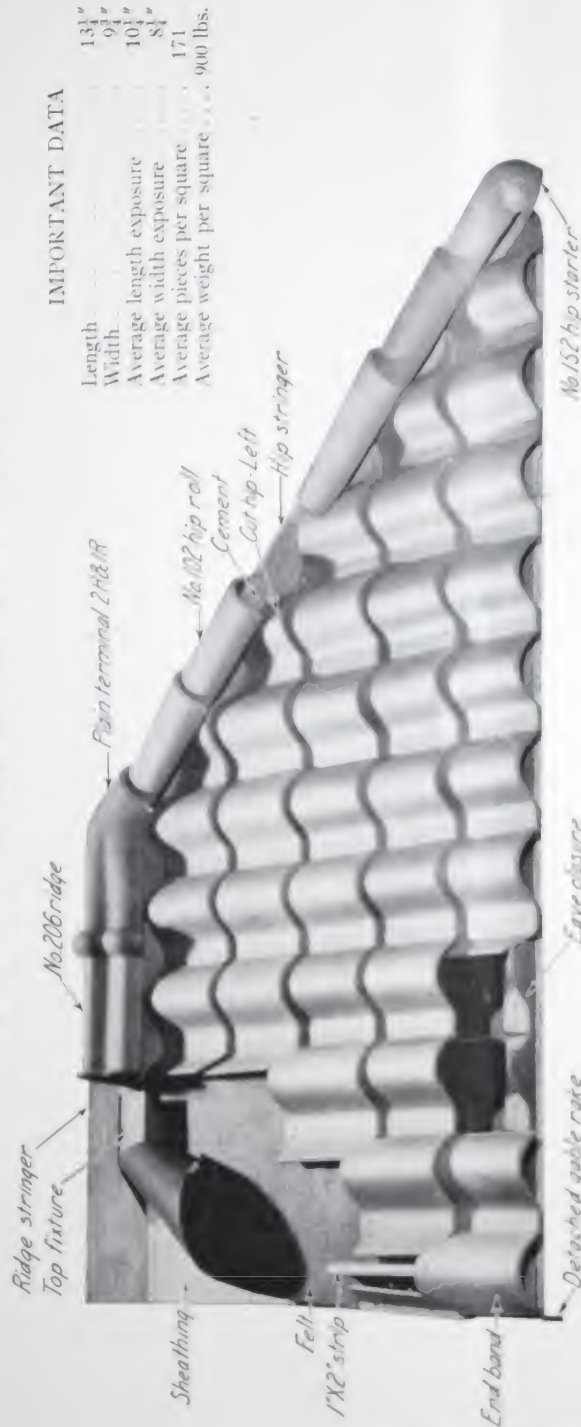
Note: Include (6g) on circular roofs.

(6h) Cement all tiles in laps, using 30 lbs. of elastic cement per square.

Note: Include (6h) on high buildings.

Details concerning any roofing problem furnished on request.
If additional copies of this catalogue are desired, please write.

DETAILS OF IMPERIAL SPANISH TILES



IMPORTANT DATA

Length	13 1/4"
Width	9 1/4"
Average length exposure	10 1/4"
Average width exposure	8 1/4"
Average pieces per square	17 1/2
Average weight per square	900 lbs.

CORRECT RAFTER LENGTHS FOR FULL LENGTH TILES

Based on 2" projection at eave of roof.

COGROU	RAFTER
1	11 1/2"
2	21"
3	31 1/2"
4	42"
5	52 1/2"
6	62 1/2"
7	72 1/2"
8	83"
9	93 1/2"
10	103 1/2"
11	113 1/2"

HIP AND RIDGE STRINGER HEIGHTS

ROOF PITCH	HIP NO. 102	RIDGE NO. 206
4" Rise to 12" Run	5"	6 1/2"
5" Rise to 12" Run	5"	6 1/2"
6" Rise to 12" Run	5"	6 1/2"
7" Rise to 12" Run	5"	6 1/2"
8" Rise to 12" Run	5"	6 1/2"
9" Rise to 12" Run	5"	6 1/2"
10" Rise to 12" Run	5"	6 1/2"
11" Rise to 12" Run	5"	6 1/2"
12" Rise to 12" Run	5"	6 1/2"
13" Rise to 12" Run	5"	6 1/2"
14" Rise to 12" Run	5"	6 1/2"
15" Rise to 12" Run	5"	6 1/2"

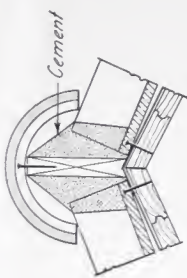
ROOFING TILES, CLAY, IMPERIAL
LUDOWICI-CELADON COMPANY
A T A ONE NUMBER 12-1

DETAILS OF IMPERIAL SPANISH TILES AND FITTINGS

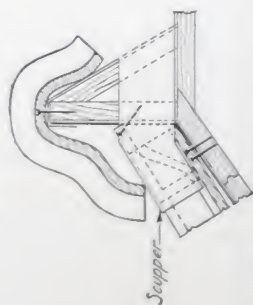
SCALE $1\frac{1}{2}" = 1'-0"$



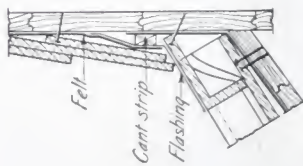
Deck section showing
flashing over top
of tiles.



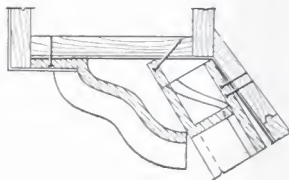
Hip section showing
No. 102 hip roll.



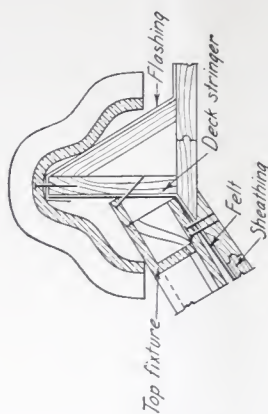
Deck section showing No. 206
cut-off ridge and $\frac{3}{4} \times 4$ inch
scuppers
draining deck.



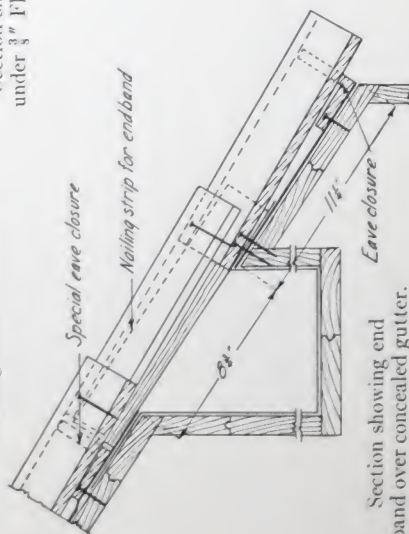
Section showing flashing
under $\frac{3}{8}$ inch Flat Shingle Tiles.



Deck section showing
No. 206 deck
mould-raised flange.



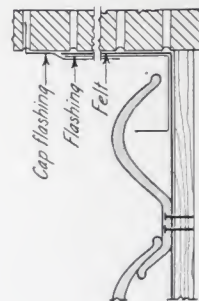
Deck section showing
No. 206 ridge.



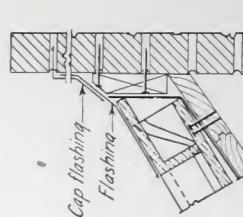
Section showing end
band over concealed gutter.



Section showing left
gable rake and end band.



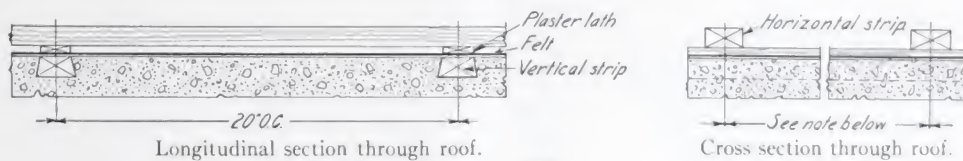
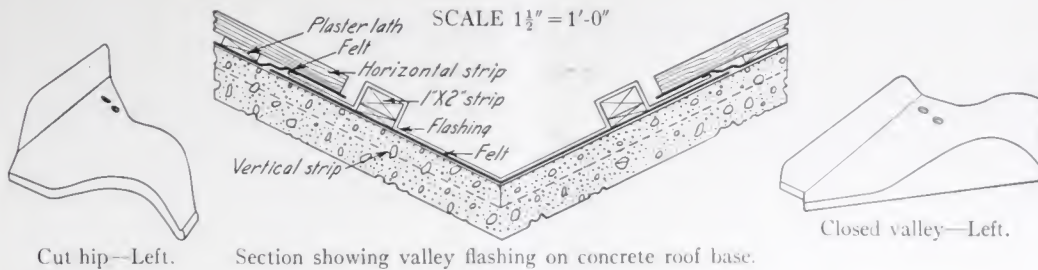
Section showing flashing
under side of tiles.



Section showing flashing
over top of tiles.

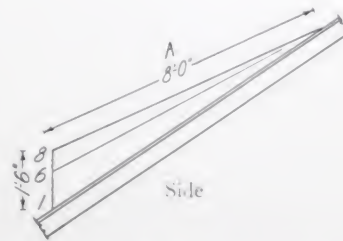
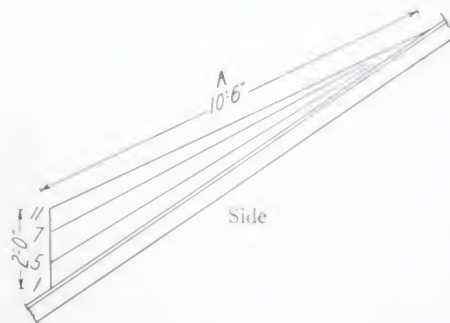
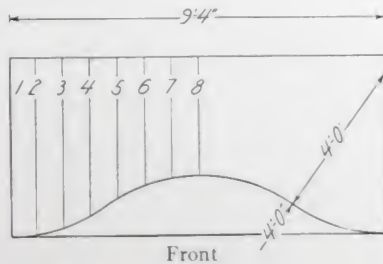
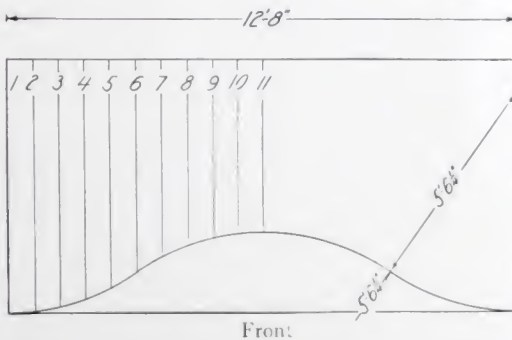
DETAILS OF IMPERIAL SPANISH TILES AND FITTINGS

APPLICATION OVER CONCRETE



Application of wood strips to concrete roof base.
Exact spacing of horizontal strips determined by shade of tiles.

DIAGRAM OF EYEBROW DORMERS

SCALE $\frac{1}{4}$ " = 1'-0"

Eyebrow dormers must be constructed as shown above for Spanish tiles. Rafters and sheathing must show a straight line from the curved eave to the point directly above where it joins main roof and on a line with the point where center line of eyebrow meets main roof. See front elevation.

Larger or smaller effects can be secured providing vertical height and radii shown are increased or decreased proportionately.

Distance "A" should not be decreased and it must be increased when roof pitch is steeper than 12" rise in 12" run.

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

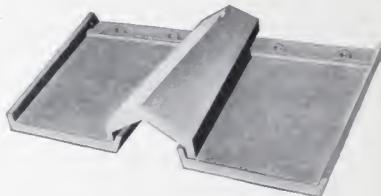
Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

ROMAN TILES



These patterns are available in a range of colors in a variety of surface textures.

GREEK TILES



SPECIFICATIONS

Note: Notes are explanatory or advisory only and should not be included in the specifications.

Note: Words in italics enclosed within parentheses are selective to suit particular condition. Include or omit as required.

Note: Clauses are selective. Include or omit as they apply.

(1) Tiles

(1a) Cover roofs so indicated with Ludowici-Celadon Company's Imperial (*Roman*) (*Greek*) tiles and fittings of (*specify*) color.

(1b) (*Hips shall be cut*) (*and*) valleys shall be cut and closed before burning.

(2) Nails

All nails for flashings and tiles shall be copper.

(3) Felt

(3a) Lay asphalt felt weighing 30 lbs. per square, doubled on (*low pitches*) (*rough surfaces*) (*hips*) (*valleys*) (*and*) ridges. Lay parallel to eaves. Lap 2½" horizontally and 6" vertically. Fasten with large-headed galvanized nails.

(3b) Extend felt (6" up vertical walls) (*and*) 4" over (*gutter*) (*and*) (*valley*) metal.

(4) Wood Strips

(4a) Provide 1" x 2½" strips under covers and 1" stringers of necessary height under (*hip rolls and*) ridges.

(4b) Embed parallel with the pitch on 20" centers 1" x 2" beveled wood strips flush with surface of concrete. Fasten felt with lath nailed over these strips. At right angles to embedded strips, over lath, install 1" x 2" strips spaced to suit pan tiles.

Note: Include (4b) if roof base is concrete.

(5) Flashings

(5a) Line valleys with 16 oz. copper at least 20" wide. Turn edge over ¼". Lap joints at least 4". Fasten with cleats. Do not solder.

(5b) At sides of vertical surfaces, extend base flashing at least 6" up wall, 4" under tiles and turn up edge 2".

(5c) At fronts, extend flashing at least 3" up wall and 4" over tiles.

(5d) Masonry wall shall be cap flashed and pointed.

(5e) Where tile and metal roofs intersect, extend metal up tile roof 12" or more.

(5f) Extend gutter metal up roof to a point higher than outer edge of gutter.

(6) Laying

(6a) Lay tiles to straight lines, parallel and at right angles to eaves, lapped 3". Fasten with 1½" copper nails. Fasten tiles overlapping sheet metal with copper wire and elastic cement.

(6b) Leave opening of 6" or more across valleys.

(6c) Cement gable rakes to field tiles and fasten with 2½" copper nails.

(6d) Cement hip rolls in laps and fasten with 2" copper nails.

(6e) Cement ridges in laps and fasten with 2½" copper nails.

(6f) Where tiles join hip stringers make waterproof with elastic cement.

(6g) Cement small pieces of graduated tiles solidly with elastic cement.

Note: Include (6g) on circular roofs.

(6h) Cement all tiles in laps, using 30 lbs. of elastic cement per square.

Note: Include (6h) on high buildings.

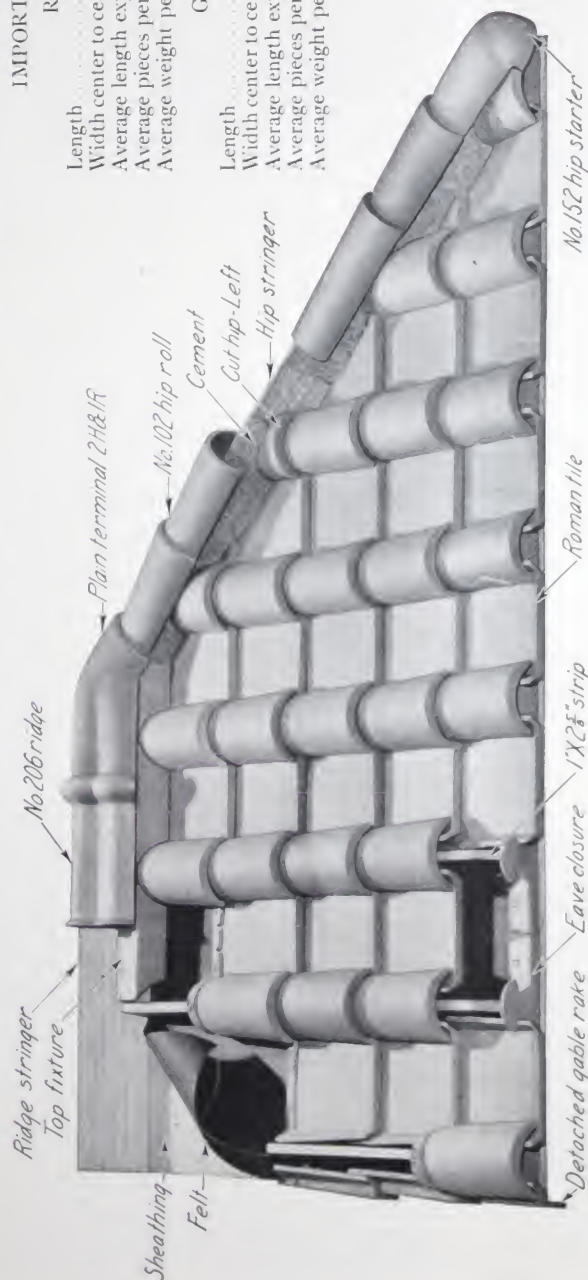
Details concerning any roofing problem furnished on request.
If additional copies of this catalogue are desired, please write.

DETAILS OF IMPERIAL ROMAN AND GREEK TILES

IMPORTANT DATA

ROMAN	
Length	12 $\frac{3}{4}$ "
Width center to center of covers	12"
Average length exposure	10"
Average pieces per square	240
Average weight per square	1100 lbs.

GREEK	
Length	12 $\frac{3}{4}$ "
Width center to center of covers	12"
Average length exposure	10"
Average pieces per square	240
Average weight per square	1250 lbs.

CORRECT RAFTER LENGTHS
FOR FULL LENGTH ROMAN
OR GREEK TILES

Based on 2" projection at eave of roof

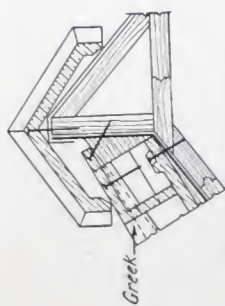
COLLETS	RAFTERS
1	10 $\frac{1}{2}$ "
2	20 $\frac{1}{2}$ "
3	30 $\frac{1}{2}$ "
4	40 $\frac{1}{2}$ "
5	50 $\frac{1}{2}$ "
6	60 $\frac{1}{2}$ "
7	70 $\frac{1}{2}$ "
8	80 $\frac{1}{2}$ "
9	90 $\frac{1}{2}$ "
10	100 $\frac{1}{2}$ "
11	110 $\frac{1}{2}$ "

HIP AND RIDGE STRINGER HEIGHTS

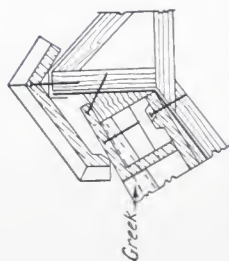
Roof Pitch	ROMAN		GREEK	
	Hip No. 101	Ridge No. 206	Hip-Cover	Ridge No. 211
4" Rise to 12" Run	6 $\frac{1}{2}$ "	7 $\frac{1}{4}$ "	7"	6"
5" Rise to 12" Run	6 $\frac{1}{2}$ "	7"	7"	5 $\frac{3}{4}$ "
6" Rise to 12" Run	6 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	7"	5 $\frac{1}{2}$ "
7" Rise to 12" Run	6 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	5 $\frac{1}{4}$ "
8" Rise to 12" Run	6 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	5"
9" Rise to 12" Run	6 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	4 $\frac{3}{4}$ "
10" Rise to 12" Run	6 $\frac{1}{2}$ "	6"	6 $\frac{1}{2}$ "	4 $\frac{1}{2}$ "
11" Rise to 12" Run	6 $\frac{1}{2}$ "	5 $\frac{3}{4}$ "	6 $\frac{1}{2}$ "	4 $\frac{1}{4}$ "
12" Rise to 12" Run	6"	5 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	4"
13" Rise to 12" Run	6"	5 $\frac{1}{4}$ "	6 $\frac{1}{2}$ "	3 $\frac{3}{4}$ "
14" Rise to 12" Run	6"	5 $\frac{1}{8}$ "	6 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "

DETAILS OF IMPERIAL ROMAN AND GREEK TILES AND FITTINGS

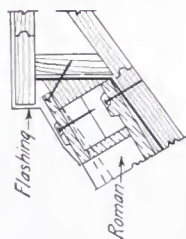
SCALE $1\frac{1}{2}" = 1'-0"$



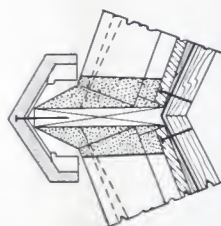
Deck section showing
No. 211 ridge.



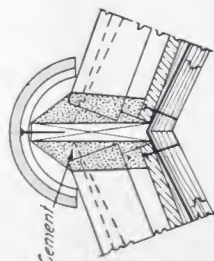
Deck section showing
No. 211 cut-off ridge.



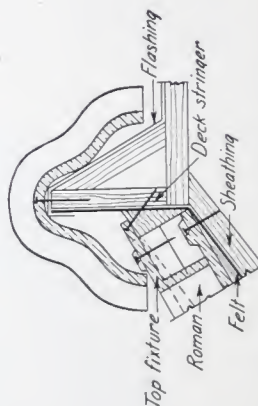
Deck section showing
flashing over top of
tiles (see note).



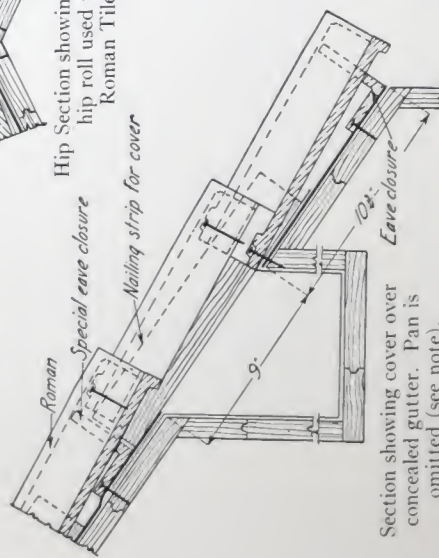
Hip section showing
Greek cover used as hip
roll with Greek Tiles.



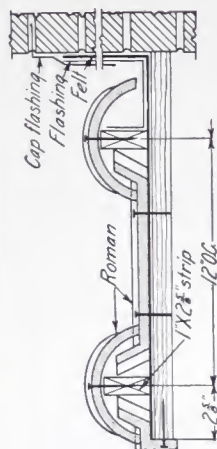
Hip section showing No. 102
hip roll used with
Roman Tiles.



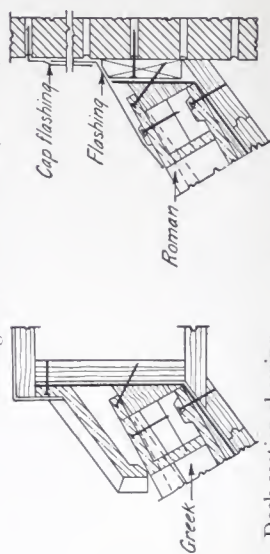
Deck section showing No. 206 ridge.



Section showing cover over
concealed gutter. Pan is
omitted (see note).

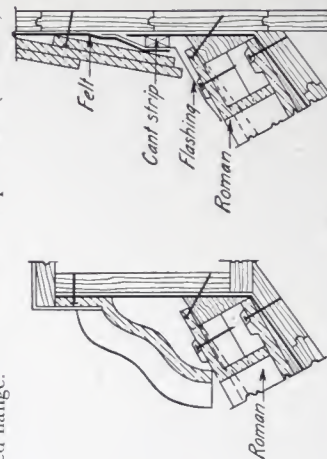


Section showing left gable rake, also
flashing under side of tiles (see note).



Deck section showing
No. 211 deck mould-
raised flange.

Section showing flashing
over top of tiles (see note).



Section showing flashing
under $\frac{3}{8}"$ Flat Shingle
Tiles (see note).

NOTE: Gable, flashing, flush deck and gutter
treatments for Greek are the same as detailed
for Roman Tiles.

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Floor Tiles

CHICAGO, 104 South Michigan Avenue

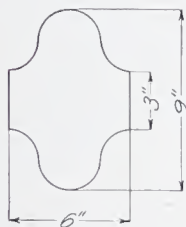
NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

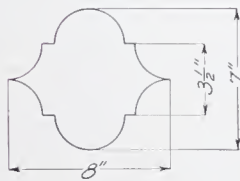
Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

FLOOR TILES

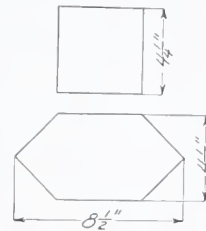
These shapes, in colors and textures originally manufactured for individual work of certain architects from their own designs, are now produced in quantities allowing their more general use. They are moderately priced.



Provence



Valencia



Renaissance

PIECES PER SQUARE FOOT

Based on 1/8" mortar joint.

Provence, 3.86

Valencia, 4.28

*Renaissance, squares, 1.88

*Renaissance, hexagons, 3.76

*Based on design showing square surrounded by hexagons.



IMPERIAL ROOFING TILES

LUDOWICI-CELADON COMPANY

CHICAGO—104 South Michigan Avenue

NEW YORK—565 Fifth Avenue WASHINGTON—738 Fifteenth Street, N.W.

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LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

SPANISH TILES

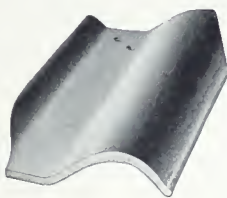
This pattern is available in a range of colors in a variety of surface textures

SPECIFICATIONS

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Note: Words in italics enclosed within parentheses are selective to suit particular condition. Include or omit as required.

Note: Clauses are selective. Include or omit as they apply.



(1) Tiles

(1a) Cover roofs so indicated with Ludowici-Celadon Company's Imperial Spanish tiles and fittings of (*specify*) color.

(1b) (*Hips shall be cut*) (*and*) valleys shall be cut and closed before burning.

(2) Nails

All nails for flashings and tiles shall be copper.

(3) Felt

(3a) Lay asphalt felt weighing 30 lbs. per square, doubled on (*low pitches*) (*rough surfaces*) (*hips*) (*valleys*) (*and*) ridges. Lay parallel to eaves. Lap $2\frac{1}{2}$ " horizontally and 6" vertically. Fasten with large-headed galvanized nails.

(3b) Extend felt (6" *up vertical walls*) (*and*) 4" over (*gutter*) (*and*) (*valley*) metal.

(4) Wood Strips

(4a) Provide 1" x 2" strips under end bands and 1" stringers of necessary height under (*hip rolls and*) ridges.

(4b) Embed parallel with the pitch on 20" centers 1" x 2" beveled wood strips flush with surface of concrete. Fasten felt with lath nailed over these strips. At right angles to embedded strips, over lath, install 1" x 2" strips spaced to suit tiles.

Note: Include (4b) if roof base is concrete.

(5) Flashings

(5a) Line valleys with 16 oz. copper at least 20" wide. Turn edge over $\frac{1}{4}$ ". Lap joints at least 4". Fasten with cleats. Do not solder.

(5b) At sides of vertical surfaces, extend base flashing at least 6" up wall, 4" under tiles and turn up edge $1\frac{1}{2}$ ".

(5c) At fronts, extend flashing at least 3" up wall and 4" over tiles.

(5d) Masonry wall shall be cap flashed and pointed.

(5e) Where tile and metal roofs intersect, extend metal up tile roof 12" or more.

(5f) Extend gutter metal up roof to a point higher than outer edge of gutter.

(6) Laying

(6a) Lay tiles to straight lines, parallel and at right angles to eaves, lapped 3". Fasten with $1\frac{1}{2}$ " copper nails. Fasten tiles overlapping sheet metal with copper wire and elastic cement.

(6b) Leave opening of 6" or more across valleys.

(6c) Cement gable rakes to field tiles and fasten with $2\frac{1}{2}$ " copper nails.

(6d) Cement hip rolls in laps and fasten with 2" copper nails.

(6e) Cement ridges in laps and fasten with $2\frac{1}{2}$ " copper nails.

(6f) Where tiles join hip stringers make waterproof with elastic cement.

(6g) Cement small pieces of graduated tiles solidly with elastic cement.

Note: Include (6g) on circular roofs.

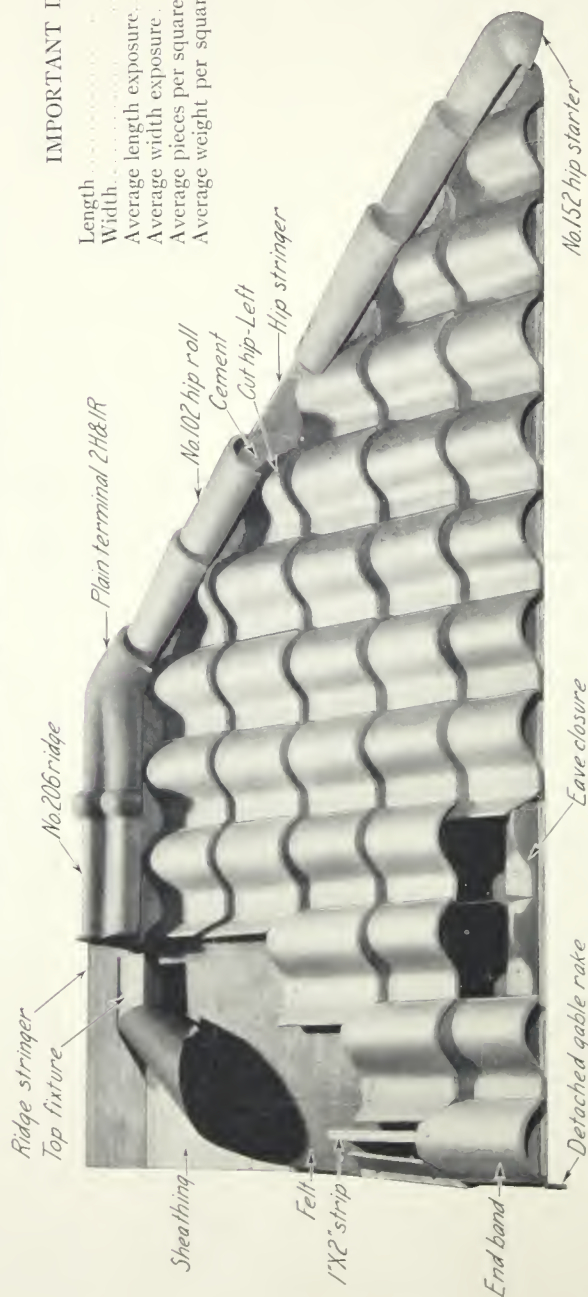
(6h) Cement all tiles in laps, using 30 lbs. of elastic cement per square.

Note: Include (6h) on high buildings.

Details concerning any roofing problem furnished on request.

Other patterns shown in folders I-1, I-2, I-3, I-4 and I-6.

DETAILS OF IMPERIAL SPANISH TILES



IMPORTANT DATA

Length	13 1/4"
Width	9 3/4"
Average length exposure	10 1/2"
Average width exposure	8 1/4"
Average pieces per square	171
Average weight per square	900 lbs.

CORRECT RAFTER LENGTHS FOR FULL LENGTH TILES

Based on 2" projection at eave of roof.

COURSE	RAFTER
1	11 1/4"
2	21 3/4"
3	31 3/4"
4	42"
5	52 1/4"
6	62 3/4"
7	72 3/4"
8	83"
9	93 1/4"
10	103 1/4"
11	113 1/4"

HIP AND RIDGE STRINGER HEIGHTS

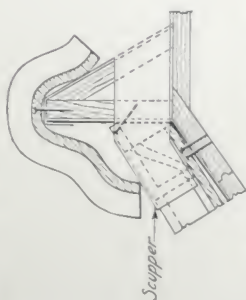
ROOF PITCH	HIP NO. 102	RIDGE NO. 206
4" Rise to 12" Run	5"	6 1/2"
5" Rise to 12" Run	4 7/8"	6 1/4"
6" Rise to 12" Run	4 3/4"	6"
7" Rise to 12" Run	4 3/8"	5 3/4"
8" Rise to 12" Run	4 1/2"	5 1/2"
9" Rise to 12" Run	4 1/4"	5 1/4"
10" Rise to 12" Run	4 1/8"	5 1/8"
11" Rise to 12" Run	4 1/4"	5 1/4"
12" Rise to 12" Run	4 1/8"	5"
13" Rise to 12" Run	4 1/4"	4 7/8"
14" Rise to 12" Run	4 1/8"	4 3/4"
15" Rise to 12" Run	4 1/4"	4 1/2"

DETAILS OF IMPERIAL SPANISH TILES AND FITTINGS

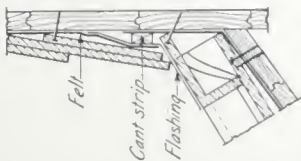
SCALE $1\frac{1}{2}" = 1'-0"$



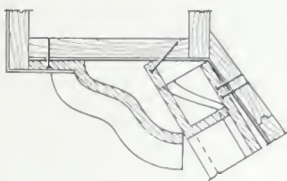
Deck section showing
flashing over top
of tiles.



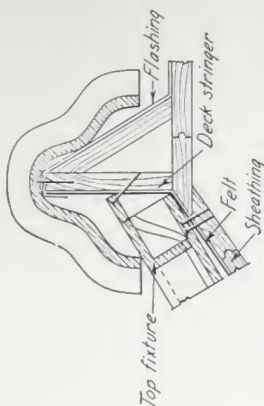
Deck section showing No. 206
cut-off ridge and 3" x 4" scuppers
draining deck.



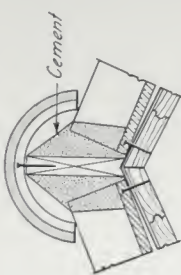
Section showing flashing
under $\frac{3}{8}"$ Flat Shingle Tiles.



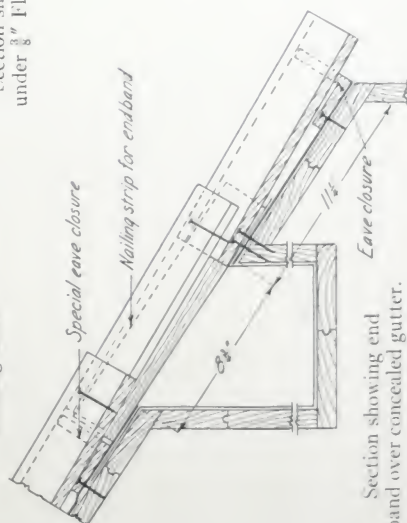
Deck section showing
No. 206 deck
mould-raised flange.



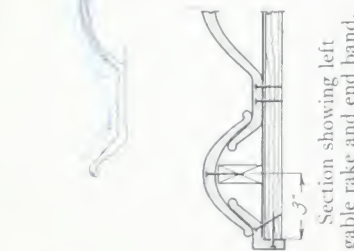
Deck section showing
No. 206 ridge.



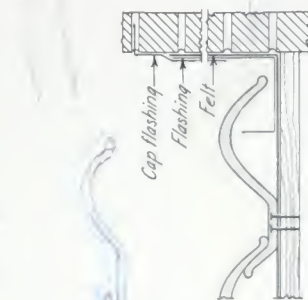
Hip section showing
No. 102 hip roll.



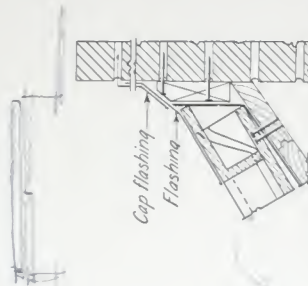
Section showing end
band over concealed gutter.



Section showing left
gable rake and end band.



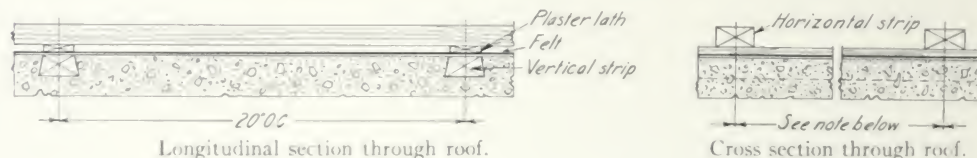
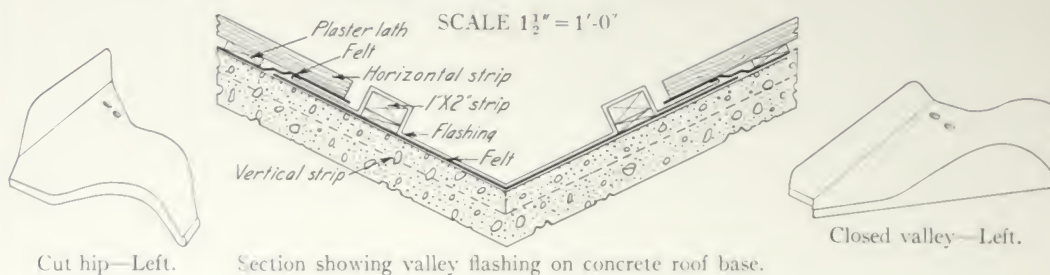
Section showing flashing
under side of tiles.



Section showing flashing
over top of tiles.

DETAILS OF IMPERIAL SPANISH TILES AND FITTINGS

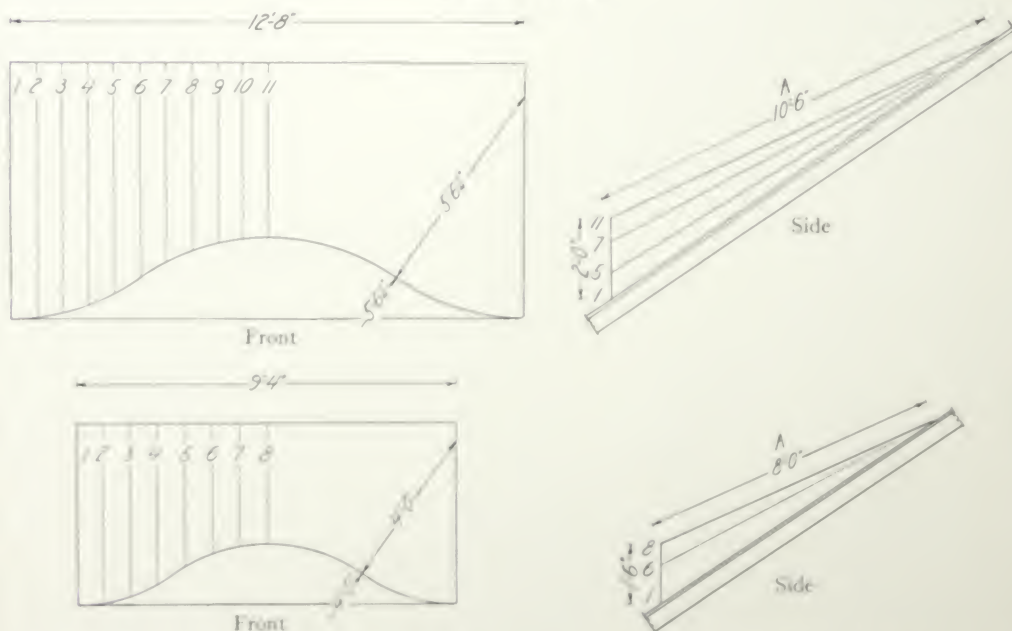
APPLICATION OVER CONCRETE



Application of wood strips to concrete roof base.
Exact spacing of horizontal strips determined by shade of tiles.

DIAGRAM OF EYEBROW DORMERS

SCALE $\frac{1}{4}$ " = 1'-0"



Eyebrow dormers must be constructed as shown above for Spanish tiles. Rafters and sheathing must show a straight line from the curved eave to the point directly above where it joins main roof and on a line with the point where center line of eyebrow meets main roof. See front elevation.

Larger or smaller effects can be secured providing vertical height and radii shown are increased or decreased proportionately.

Distance "A" should not be decreased and it must be increased when roof pitch is steeper than 12" rise in 12" run.

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50-89-B-4344-76

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

SHINGLE TILES

These patterns are available in a range of colors in a variety of surface textures

SPECIFICATIONS

Note: Notes are explanatory or advisory only and should not be included in the specifications.

Note: Words in italics enclosed within parentheses are selective to suit particular condition. Include or omit as required.

Note: Clauses are selective. Include or omit as they apply.

(1) Tiles

(1a) Cover roofs so indicated with Ludowici-Celadon Company's Imperial (*specify pattern*) Shingle tiles and fittings of (*specify*) color.

(1b) (*Hips*) (*and*) (*valleys*) shall be cut before burning.

(2) Nails

All nails for flashings and tiles shall be copper.

(3) Felt

(3a) Lay asphalt felt weighing 30 lbs. per square, doubled on (*low pitches*) (*rough surfaces*) (*hips*) (*valleys*) (*and*) ridges. Lay parallel to eaves. Lap $2\frac{1}{2}$ " horizontally and 6" vertically. Fasten with large-headed galvanized nails.

(3b) Extend felt (6" up vertical walls) (*and*) 4" over (*gutter*) (*and*) (*valley*) metal.

(4) Wood Strips

(4a) Provide $\frac{3}{4}$ " x 1" cant strips at eaves and 1" stringers of necessary height under (*hip rolls and*) ridges.

(4b) Embed parallel with the pitch on 20" centers 1" x 2" beveled wood strips flush with surface of concrete. Fasten felt with lath nailed over these strips. At right angles to embedded strips, over lath, install 1" x 2" strips spaced to suit tiles.

Note: Include (4b) if roof base is concrete.

(5) Flashings

(5a) At sides of vertical surfaces, insert base flashing between each course of tiles. Lap 3" and extend 4" under tiles and at least 6" up wall.



(5b) At fronts, extend flashing at least 3" up wall and 4" over tiles.

(5c) Masonry wall shall be cap flashed and pointed.

(5d) Where tile and metal roofs intersect, extend metal up tile roof 12" or more.

(5e) Extend gutter metal up roof to a point higher than outer edge of gutter.

(5f) **Open Valleys**—Line valleys with 16 oz. copper at least 20" wide. Turn edge over $\frac{1}{4}$ ". Lap joints at least 4". Fasten with cleats. Do not solder.

(5g) **Closed Valleys**—Flash between each course of tiles with 16" strips of same length as tiles.

(5h) **Rounded Valleys**—Flash between each course of tiles with curved strips of same length as tiles. Extend strips 8" beyond the curve at either side of valley.

(6) Laying

(6a) Lay tiles (*regular*) (*irregular*) with (*specify*) average exposure and not less than 2" head lap on the third course. Double tiles at eave. Fasten with ($1\frac{1}{2}$ " ($1\frac{1}{4}$ " (*specify*) copper nails. Fasten tiles overlapping sheet metal with copper wire and elastic cement.

Note: Select whether regular or irregular and specify $1\frac{1}{2}$ " nails for $\frac{3}{4}$ " shingles; $1\frac{1}{4}$ " nails for $\frac{5}{8}$ " shingles; longer for thicker shingles.

(6b) Leave opening of 6" or more across valleys.

(6c) Cement end bands in laps.

(6d) Cement hip rolls in laps and fasten with 2" copper nails.

(6e) Cement ridges in laps and fasten with $2\frac{1}{2}$ " copper nails.

(6f) Where tiles join hip stringers make waterproof with elastic cement.

(6g) Cement small pieces of graduated tiles solidly with elastic cement.

Note: Include (6g) on circular roofs.

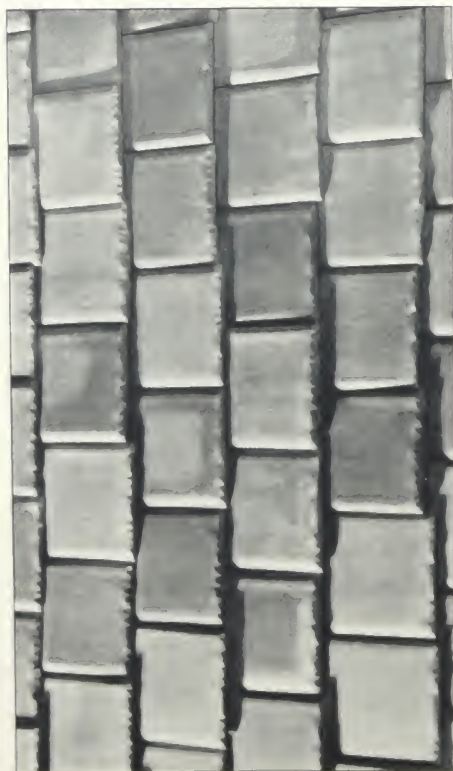
(6h) Cement all tiles in laps, using 30 lbs. of elastic cement per square.

Note: Include (6h) on high buildings.

Details concerning any roofing problem furnished on request.

Other patterns shown in folders I-2, I-3, I-4, I-5 and I-6.

IMPERIAL SHINGLE TILES



PROVINCIAL

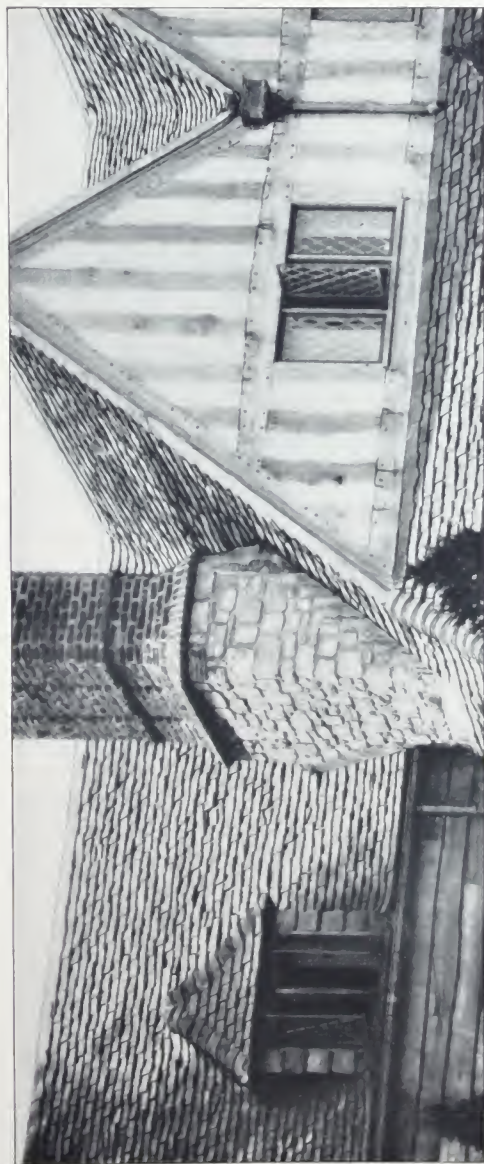
Length.....	15 "
Width.....	7 "
Thickness.....	1 1/2 "
Average exposure.....	7" x 6 1/2 "
Average pieces per square.....	317
Average weight per square.....	1230 lbs.



BRITTANY

Length.....	12 "
Width.....	7 "
Thickness.....	3/8 "
Average exposure.....	7" x 5 "
Average pieces per square.....	412
Average weight per square.....	1840 lbs.

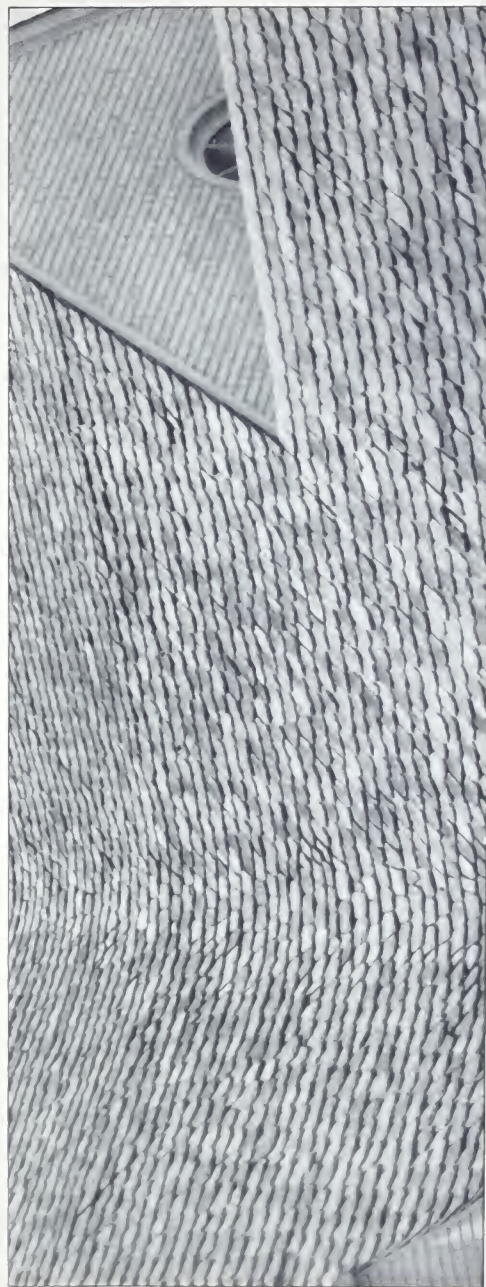
IMPERIAL SHINGLE TILES



Brittany Shingle Tiles



Mission cover ridge



Yale Memorial Tiles



Sprocket hip roll

DETAILS OF IMPERIAL $\frac{3}{8}$ " FLAT AND $\frac{5}{8}$ " SLAB SHINGLE TILES AND FITTINGS

SCALE $1\frac{1}{2}" = 1'-0"$

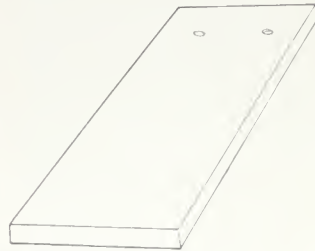
IMPORTANT DATA

$\frac{3}{8}$ " FLAT SHINGLE TILES

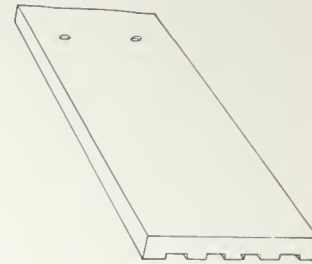
Length.....12"
Width.....6"
Average exposure.....6"x5"
Average pieces per square.....480
Average weight per square..1225 lbs.

$\frac{5}{8}$ " SLAB SHINGLE TILES

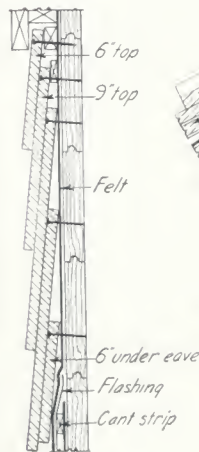
Length.....12"
Width.....6 $\frac{1}{4}"$
Average exposure.....6 $\frac{1}{4}"$ x5"
Average pieces per square.....461
Average weight per square..1780 lbs.



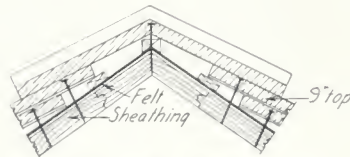
$\frac{3}{8}$ " Flat Shingle Tile.



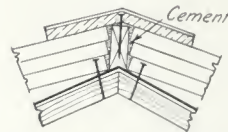
$\frac{5}{8}$ " Slab Shingle Tile.



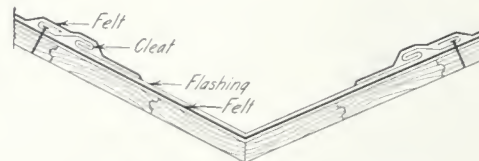
Section A-A.



Section showing No. 203 ridge.

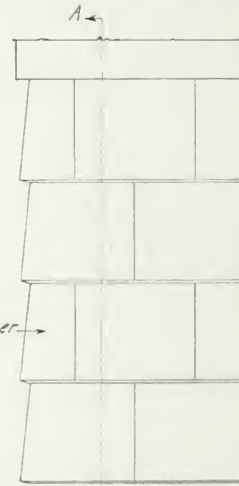


Hip section showing No. 111 Hip roll.

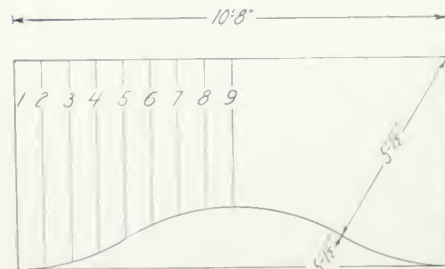


Cross section showing valley flashing on wood roof base. See specifications.

Siding corner

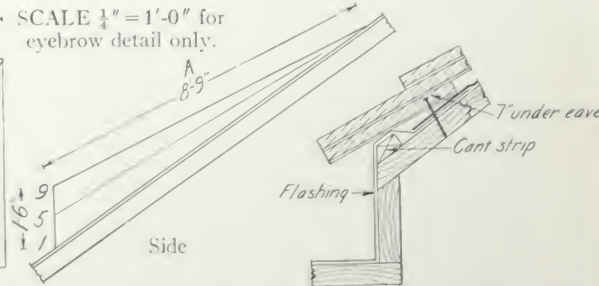


Elevation showing $\frac{3}{8}$ " Flat Shingle Tiles.



Front

SCALE $\frac{1}{4}" = 1'-0"$ for eyebrow detail only.



Eave section showing gutter construction.

Eyebrow dormers must be constructed as shown above for $\frac{5}{8}$ " Slab Shingle Tiles. Rafters and sheathing must show a straight line from the curved eave to the point directly above where it joins main roof and on a line with the point where center line of eyebrow meets main roof. See front elevation.

Larger or smaller effects can be secured providing

vertical height and radius shown are increased or decreased proportionately. Distance "A" should not be decreased and it must be increased when roof pitch is steeper than 12" rise in 12" run.

Crowd tiles at top of dormer and spread them at eave. Shorten exposure of tiles as they leave main roof until tail lines of tiles on both surfaces are aligned.

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

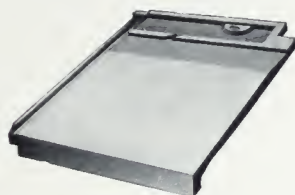
CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

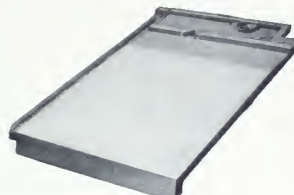
Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

INTERLOCKING SHINGLE TILES



CLOSED SHINGLE

These patterns are available in a range of colors in a variety of surface textures.



ENGLISH SHINGLE

SPECIFICATIONS

Note: Notes are explanatory or advisory only and should not be included in the specifications.

Note: Words in italics enclosed within parentheses are selective to suit particular condition. Include or omit as required.

Note: Clauses are selective. Include or omit as they apply.

(1) Tiles

(1a) Cover roofs so indicated with Ludowici-Celadon Company's Imperial (Closed) (English) Shingle tiles and fittings of (*specify*) color.

(1b) (*Hips*) (and) (*valleys*) shall be cut before burning.

(2) Nails

All nails for flashings and tiles shall be copper.

(3) Felt

(3a) Lay asphalt felt weighing 30 lbs. per square, doubled on (*low pitches*) (*rough surfaces*) (*hips*) (*valleys*) (and) ridges. Lay parallel to eaves. Lap $2\frac{1}{2}$ " horizontally and 6" vertically. Fasten with large-headed galvanized nails.

(3b) Extend felt (6" up vertical walls) (and) 4" over (gutter) (and) (valley) metal.

(4) Wood Strips

(4a) Provide $\frac{3}{4}$ " x 1" cant strips at eaves.

Note: Include (4a) if English Shingles are specified.

(4b) Provide 1" stringers of necessary height under (hip rolls and) ridges.

(4c) Embed parallel with the pitch on 20" centers 1" x 2" beveled wood strips flush with surface of concrete. Fasten felt with lath nailed over these strips. At right angles to embedded strips, over lath, install 1" x 2" strips spaced to suit tiles.

Note: Include (4c) if roof base is concrete.

(5) Flashings

(5a) Line valleys with 16 oz. copper at least 20" wide. Turn edge over $\frac{1}{2}$ ". Lap joints at least 4". Fasten with cleats. Do not solder.

(5b) At sides of vertical surfaces, extend base flashing at least 6" up wall, 5" under tiles and turn up edge $\frac{1}{2}$ ".

(5c) At fronts, extend flashing at least 3" up wall and 4" over tiles.

(5d) Masonry wall shall be cap flashed and pointed.

(5e) Where tile and metal roofs intersect, extend metal up tile roof 12" or more.

(5f) Extend gutter metal up roof to a point higher than outer edge of gutter.

(6) Laying

(6a) Lay tiles to straight lines, parallel and at right angles to eaves, lapped 3". Fasten with 2" copper nails. Fasten tiles overlapping sheet metal with copper wire and elastic cement.

(6b) Leave opening of 6" or more across valleys.

(6c) Cement gable rakes to field tiles and fasten with 2" copper nails.

(6d) Cement hip rolls in laps and fasten with 2" copper nails.

(6e) Cement ridges in laps and fasten with $2\frac{1}{2}$ " copper nails.

(6f) Where tiles join hip stringers make waterproof with elastic cement.

(6g) Cement small pieces of graduated tiles solidly with elastic cement.

Note: Include (6g) on circular roofs.

(6h) Cement all tiles in laps, using 30 lbs. of elastic cement per square.

Note: Include (6h) on high buildings.

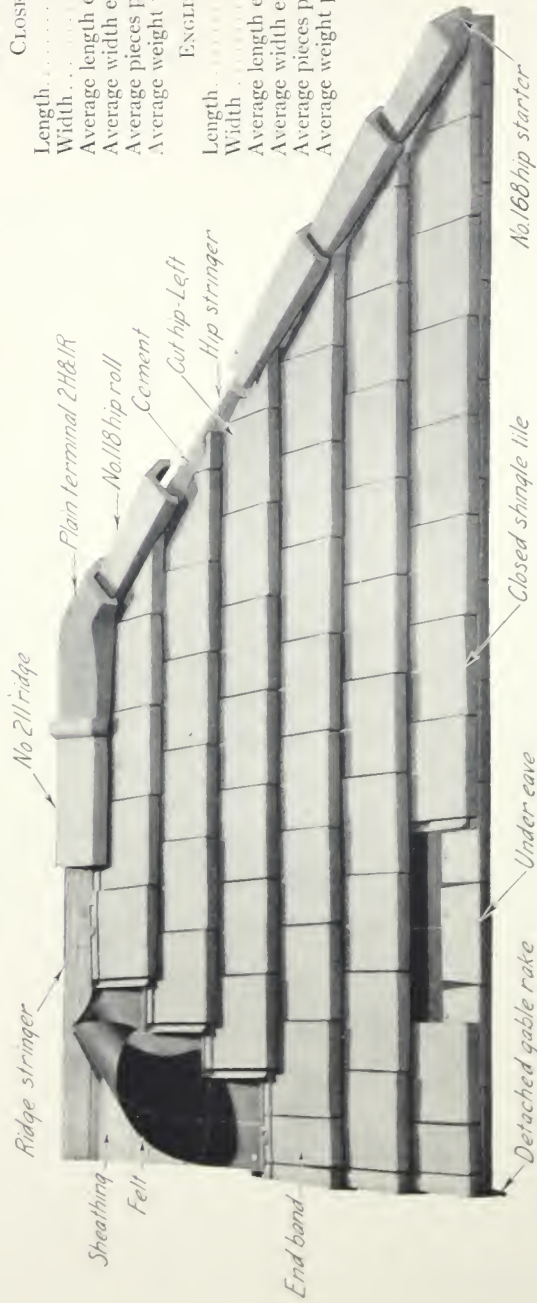
Details concerning any roofing problem furnished on request.

Other patterns shown in folders I-1, I-3, I-4, I-5 and I-6.

DETAILS OF IMPERIAL INTERLOCKING SHINGLE TILES

IMPORTANT DATA

CLOSED SHINGLE	
Length.....	11"
Width.....	8 3/4"
Average length exposure.....	8"
Average width exposure.....	8"
Average pieces per square.....	225
Average weight per square.....	900 lbs.
ENGLISH SHINGLE	
Length.....	13 1/2"
Width.....	8 3/4"
Average length exposure.....	10 3/4"
Average width exposure.....	7 3/4"
Average pieces per square.....	182
Average weight per square.....	900 lbs.



CORRECT RAFTER LENGTHS FOR FULL LENGTH TILES

Based on 2" projection at eave of roof.

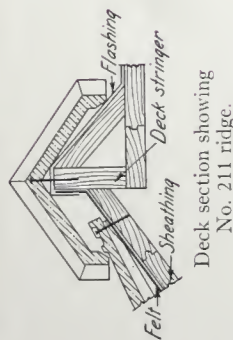
COURSE	CLOSED SHINGLE	ENGLISH SHINGLE
1	9"	11"
2	17"	21"
3	25"	31"
4	33"	41"
5	41"	51"
6	49"	61"
7	57"	72"
8	65"	82"
9	73"	92"
10	81"	102"
11	89"	112"

HIP AND RIDGE STRINGER HEIGHTS

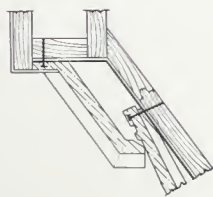
ROOF PITCH	HIP NO. 118	RIDGE NO. 211	HIP NO. 120	RIDGE NO. 211
4" Rise to 12" Run.....	27"	31"	31"	3"
5" Rise to 12" Run.....	27"	27"	31"	23"
6" Rise to 12" Run.....	28"	27"	31"	24"
7" Rise to 12" Run.....	28"	27"	31"	24"
8" Rise to 12" Run.....	28"	27"	31"	24"
9" Rise to 12" Run.....	28"	27"	31"	24"
10" Rise to 12" Run.....	28"	27"	31"	24"
11" Rise to 12" Run.....	28"	27"	31"	24"
12" Rise to 12" Run.....	28"	27"	31"	24"
13" Rise to 12" Run.....	28"	27"	31"	24"
14" Rise to 12" Run.....	28"	27"	31"	24"

DETAILS OF IMPERIAL INTERLOCKING SHINGLE TILES AND FITTINGS

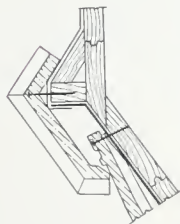
SCALE $1\frac{1}{2}" = 1'-0"$



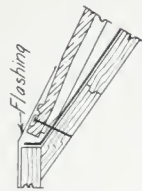
Deck section showing
No. 211 ridge.



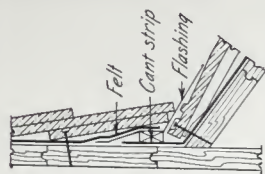
Deck section showing
No. 211 deck
mould-raised flange.



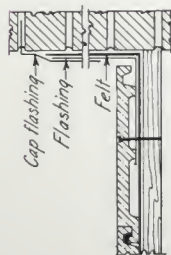
Deck section showing
No. 211 cut-off
ridge.



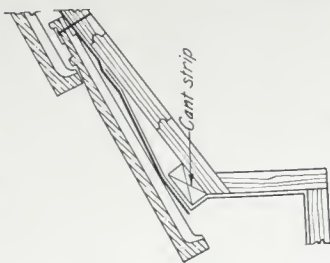
Deck section showing
flashing over top
of tiles.



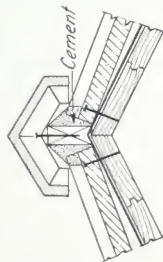
Section showing flashing
under $\frac{3}{8}"$ Flat Shingle Tiles.



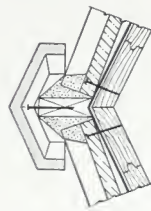
Section showing flashing
under side of tiles.



Section showing gutter
construction for English
Shingle Tiles.



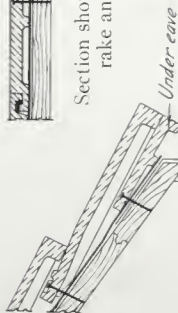
Hip section showing No. 118
hip roll used with Closed
Shingle Tiles.



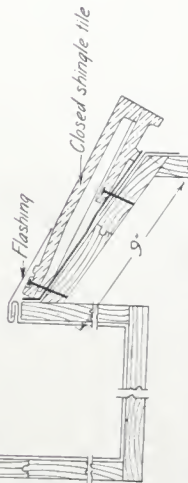
Hip section showing No. 120
hip roll used with English
Shingle Tiles.



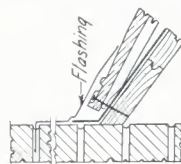
Section showing right gable
rake and end band.



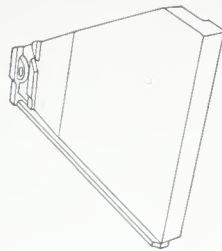
Under eave



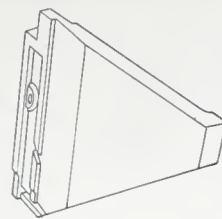
Section showing sunken gutter treatment.
When English Shingle Tiles are used, under eaves are
omitted and distance below gutter is $11\frac{1}{4}"$.



Section showing flashing
over top of tiles.



Cut hip—Left.

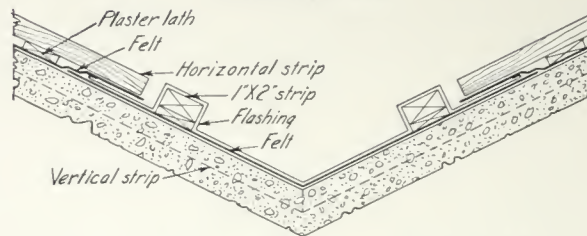


Cut valley—Right.

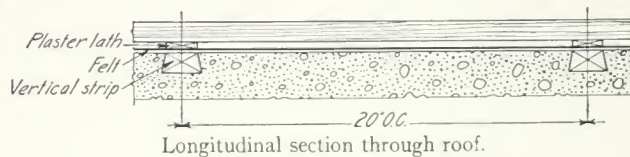
DETAILS OF IMPERIAL INTERLOCKING SHINGLE TILES AND FITTINGS

APPLICATION OVER CONCRETE

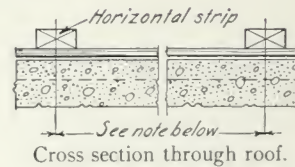
SCALE $1\frac{1}{2}" = 1'-0"$



Section showing valley flashing on concrete roof base.



Longitudinal section through roof.

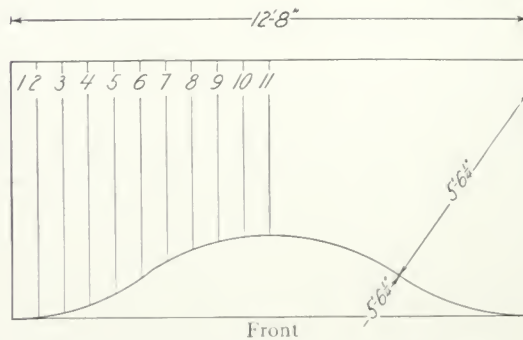


Cross section through roof.

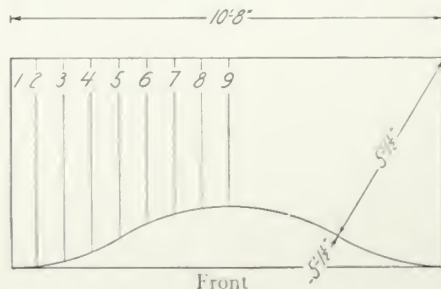
Application of wood strips to concrete roof base.
Exact spacing of horizontal strips determined by shade of tiles.

DIAGRAM OF EYEBROW DORMERS

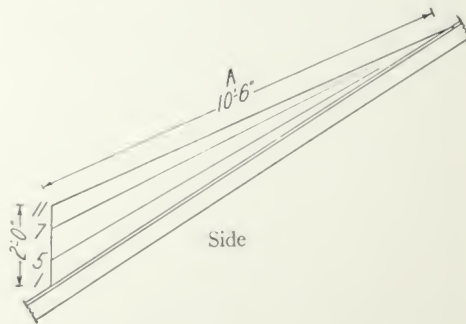
SCALE $\frac{1}{4}" = 1'-0"$



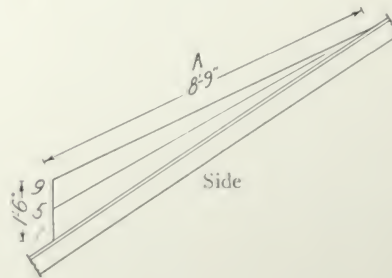
Front



Front



Side



Side

Eyebrow dormers must be constructed as shown above for Closed Shingle Tiles. Rafters and sheathing must show a straight line from the curved eave to the point directly above where it joins main roof and on a line with the point where center line of eyebrow meets main roof. See front elevation.

Larger or smaller effects can be secured providing

vertical height and radii shown are increased or decreased proportionately. Distance "A" should not be decreased and it must be increased when roof pitch is steeper than 12" rise in 12" run.

NOTE: For English Shingle tiles, eyebrow width and distance "A" must be increased 2'-0". The height remains the same.

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Makers of IMPERIAL Roofing Tiles

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COPPERVILLE, KANSAS—PERT, KANSAS

FRENCH TILES

This pattern is available in a range of colors

SPECIFICATIONS

Note: Notes are explanatory or advisory only and should not be included in the specifications.

Note: Words in italics enclosed within parentheses are selective to suit particular condition. Include or omit as required.

Note: Choices are selective. Include or omit as they apply.



(1) Tiles

(1a) Cover roofs as indicated with Ludowici-Celadon Company's Imperial French tiles and fittings of (specify) color.

(1b) (Hips) (and) (valleys) shall be cut before battening.

(2) Nails

All nails for flashings and tiles shall be copper.

(3) Felt

(3a) Lay asphalt felt weighing 40 lbs. per square, doubled on (low pitches) (rough surfaces) (hips) (valleys) (and) ridges. Lay parallel to eaves. Lap 24" horizontally and 6" vertically. Fasten with large-headed galvanized nails.

(3b) Extend felt (6" up vertical walls) (and) 4" over (gutter) (and) (valley) metal.

(4) Wood Strips

(4a) Provide 1 1/2"x2" cant strips at eaves and 2" stringers of necessary height under (big rolls and) ridges.

(4b) Embed parallel with the pitch on 20" centers 1" x 2" beveled wood strips flush with surface of concrete. Fasten felt with lath nailed over these strips. At right angles to embedded strips, over lath, install 1 1/2" x 2" strips spaced to suit tiles.

Note: Include (4b) if roof base is concrete.

(5) Flashings

(5a) Line valleys with 16 oz. copper at least 20" wide. Turn edge over 1". Lap joints at least 4". Fasten with cleats. Do not solder.

(5b) At sides of vertical surfaces, extend base flashing at least 6" up wall, 5" under tile and turn up edge 1".

(5c) At vents, extend flashing at least 5" up wall and 4" over tiles.

(5d) Masonry wall shall be vap. flashed and painted.

(5e) Where tile and metal meet, fasten metal up tile and 12" or more.

(5f) Fasten galvanized metal up roof to a point higher than outer edge of gutter.

(6) Laying

(6a) Lay tiles in straight lines, parallel and at right angles to eaves, lapped 5". Fasten with 24" copper nails. Fasten tiles overlapping sheet metal with copper wire and elastic cement.

(6b) Leave opening of 6" or more across valleys.

(6c) Cement gable sides to hold tiles and fasten with 2" copper nails.

(6d) Cement hip rolls in laps and fasten with 2" copper nails.

(6e) Cement ridges in laps and fasten with 24" copper nails.

(6f) Where tiles join hip stringers make waterproof with elastic cement.

(6g) Cement small pieces of graduated tiles solidly with elastic cement.

Note: Include (6g) on (curved roofs).

(6h) Cement all tiles in laps, using 40 lbs. of elastic cement per square.

(6i) Copper clamps shall be placed in side lock of each tile at point directly above head of tile below. Nail clamps to roof base.

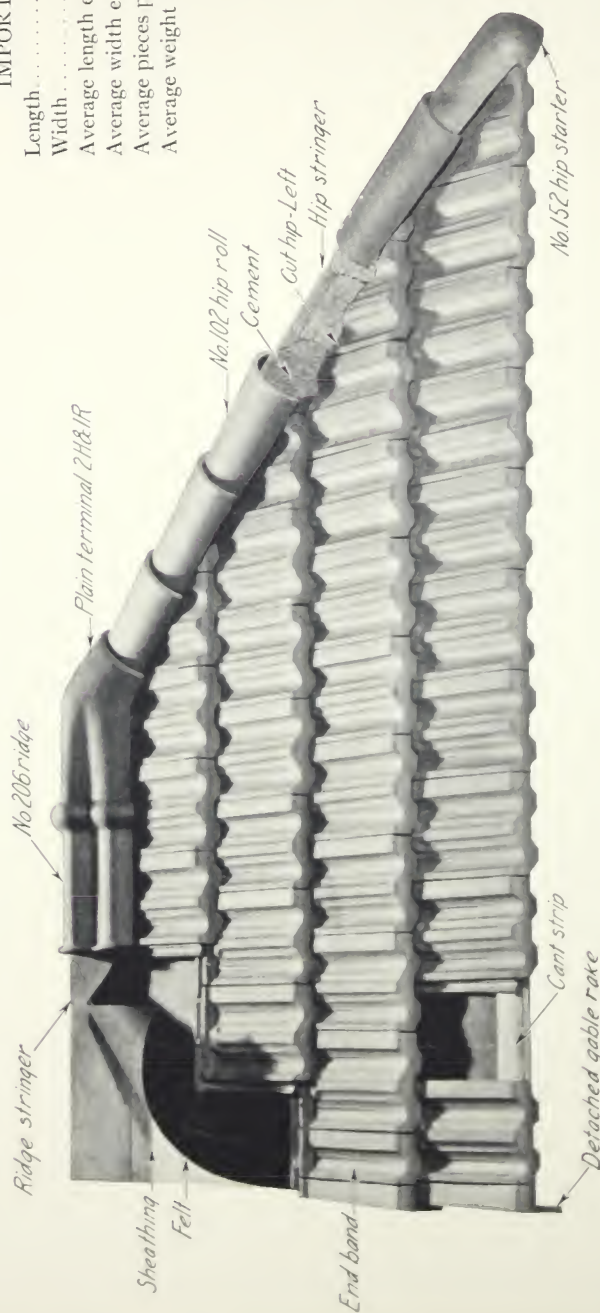
Note: Include either (6h) or (6i) on high buildings.

Details concerning any roofing problem furnished on request.
Other patterns shown in folders 1-2, 1-3, 1-4, 1-5 and 1-6.

PRINTED IN U.S.A.

DETAILS OF IMPERIAL FRENCH TILES

IMPORTANT DATA	
Length.....	16 $\frac{1}{4}$ "
Width.....	9"
Average length exposure.....	13 $\frac{3}{8}$ "
Average width exposure.....	8 $\frac{1}{8}$ "
Average pieces per square.....	133
Average weight per square.....	935 lbs.



CORRECT RAFTER LENGTHS FOR FULL LENGTH TILES

Based on 2" projection at eave of roof.

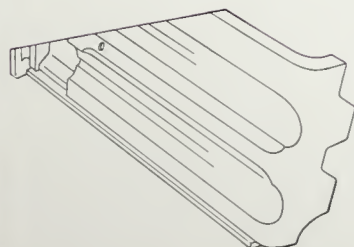
COURSE	RAFTER
1.....	14"
2.....	27 $\frac{3}{4}$ "
3.....	40 $\frac{3}{4}$ "
4.....	54 $\frac{1}{4}$ "
5.....	67 $\frac{1}{4}$ "
6.....	80 $\frac{3}{4}$ "
7.....	94 $\frac{1}{4}$ "
8.....	107 $\frac{3}{4}$ "
9.....	121"
10.....	134 $\frac{3}{4}$ "

HIP AND RIDGE STRINGER HEIGHTS

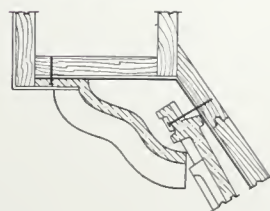
ROOF PITCH	HIP NO. 102	RIDGE NO. 206
4" Rise to 12" Run.....	4 $\frac{3}{4}$ "	5 $\frac{1}{4}$ "
5" Rise to 12" Run.....	4 $\frac{3}{4}$ "	5"
6" Rise to 12" Run.....	4 $\frac{3}{4}$ "	4 $\frac{3}{4}$ "
7" Rise to 12" Run.....	4 $\frac{3}{4}$ "	4 $\frac{1}{4}$ "
8" Rise to 12" Run.....	4 $\frac{3}{4}$ "	4 $\frac{1}{4}$ "
9" Rise to 12" Run.....	4 $\frac{3}{4}$ "	4"
10" Rise to 12" Run.....	4 $\frac{3}{4}$ "	3 $\frac{3}{4}$ "
11" Rise to 12" Run.....	4 $\frac{3}{4}$ "	3 $\frac{1}{4}$ "
12" Rise to 12" Run.....	4 $\frac{3}{4}$ "	3 $\frac{1}{4}$ "
13" Rise to 12" Run.....	4 $\frac{3}{4}$ "	3"
14" Rise to 12" Run.....	4 $\frac{3}{4}$ "	2 $\frac{7}{8}$ "
15" Rise to 12" Run.....	4 $\frac{3}{4}$ "	2 $\frac{3}{8}$ "

DETAILS OF IMPERIAL FRENCH TILES AND FITTINGS

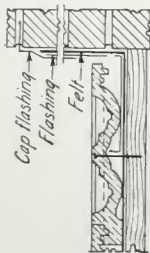
SCALE $1\frac{1}{2}" = 1'-0"$



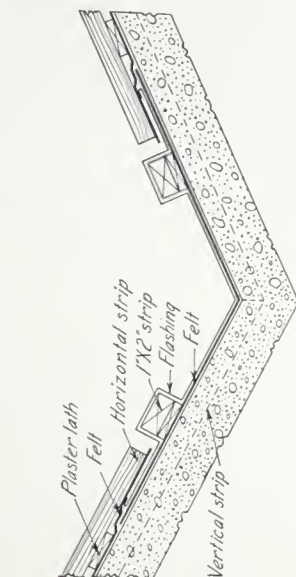
Cut hip—Left.



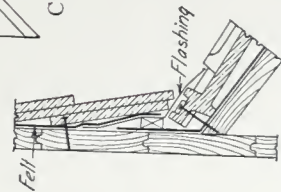
Deck section showing No. 206 deck mould-raised flange.



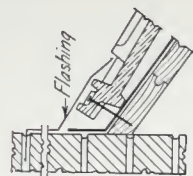
Section showing flashing under side of tiles.



Section showing valley flashing on concrete roof base.



Cut valley—Right.



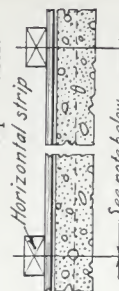
Section showing flashing over top of tiles.



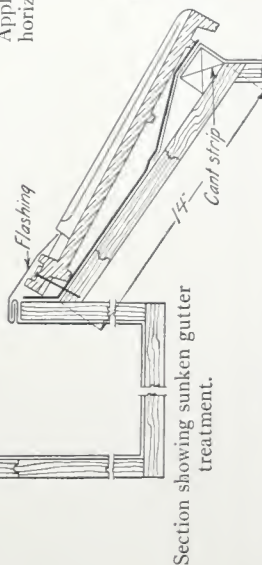
Section showing right gable rake.



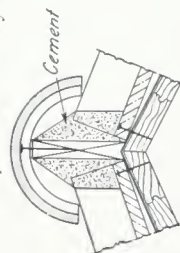
Longitudinal section through roof. Application of wood strips to concrete roof base. Exact spacing of horizontal strips determined by shade of tiles.



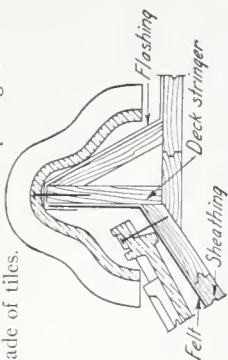
Cross section through roof.



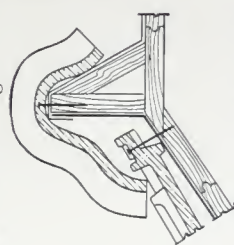
Section showing sunken gutter treatment.



Hip section showing No. 102 hip roll.



Deck section showing No. 206 ridge.



Deck section showing No. 206 cut-off ridge.

(1)

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Title
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(3)

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LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

MISSION TILES

These patterns are available in a range of colors in a variety of surface textures

SPECIFICATIONS

Note: Notes are explanatory or advisory only and should not be included in the specifications.

Note: Words in italics enclosed within parentheses are selective to suit particular condition. Include or omit as required.

Note: Clauses are selective. Include or omit as they apply.



(5b) At sides of vertical surfaces, extend base flashing at least 6" up wall, 4" under tiles and turn up edge 2".

(5c) At fronts, extend flashing at least 3" up wall and 4" over tiles.

(5d) Masonry wall shall be cap flashed and pointed.

(1) Tiles

(1a) Cover roofs so indicated with Ludowici-Celadon Company's Imperial (*specify pattern*) Mission Tiles and fittings of (*specify*) color.

(1b) Covers shall be used as (*hip roll and*) ridge.

(1c) (*Hips shall be cut*) (*and*) valleys shall be cut and closed before burning.

(2) Nails

All nails for flashings and tiles shall be copper.

(3) Felt

(3a) Lay asphalt felt weighing 30 lbs. per square, doubled on (*low pitches*) (*rough surfaces*) (*hips*) (*valleys*) (*and*) ridges. Lay parallel to eaves. Lap 2½" horizontally and 6" vertically. Fasten with large-headed galvanized nails.

(3b) Extend felt (6" up vertical walls) (*and*) 4" over (*gutter*) (*and*) (*valley*) metal.

(4) Wood Strips

(4a) Provide 1" strips of necessary height under covers (*hip rolls*) and ridges.

(4b) Embed parallel with the pitch on 20" centers 1" x 2" beveled wood strips flush with surface of concrete. Fasten felt with lath nailed over these strips. At right angles to embedded strips, over lath, install 1" x 2" strips spaced to suit pan tiles.

Note: Include (4b) if roof base is concrete.

(5) Flashings

(5a) Line valleys with 16 oz. copper at least 20" wide. Turn edge over ¼". Lap joints at least 4". Fasten with cleats. Do not solder.

(5e) Where tile and metal roofs intersect, extend metal up tile roof 12" or more.

(5f) Extend gutter metal up roof to a point higher than outer edge of gutter.

(6) Laying

(6a) Lay tiles (*regular*) (*irregular*) exposure with not less than 3" lap. Fasten with 2" copper nails. Fasten tiles overlapping sheet metal with copper wire and elastic cement.

(6b) **Irregular Effect**—Lay pans at actual exposure. Vary exposures of covers to avoid horizontal and diagonal lines using 10% additional covers.

(6c) Leave opening of 6" or more across valleys.

(6d) Cement gable rakes to field tiles and fasten with 2½" copper nails.

(6e) Cement (*hip rolls*) (*and*) (*ridges*) in laps and fasten with 2½" copper nails.

(6f) Where tiles join hip stringers make waterproof with elastic cement.

(6g) Cement small pieces of graduated tiles solidly with elastic cement.

Note: Include (6g) on circular roofs.

(6h) Cement all tiles in laps, using 30 lbs. of elastic cement per square.

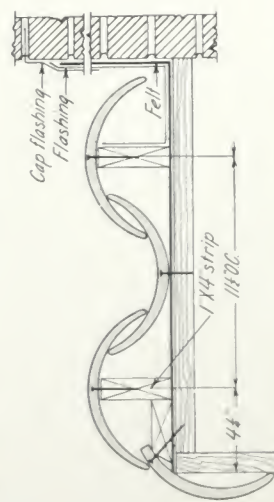
Note: Include (6h) on high buildings.

Details concerning any roofing problem furnished on request.

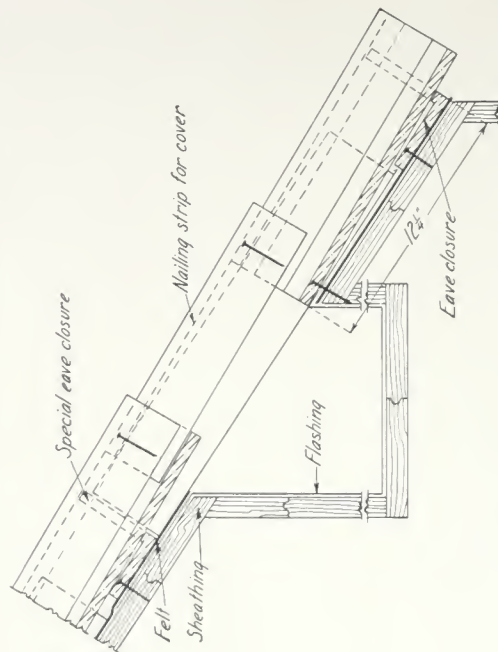
Other patterns shown in folders I-1, I-2, I-3, I-5 and I-6.

DETAILS OF IMPERIAL STRAIGHT BARREL MISSION TILES AND FITTINGS

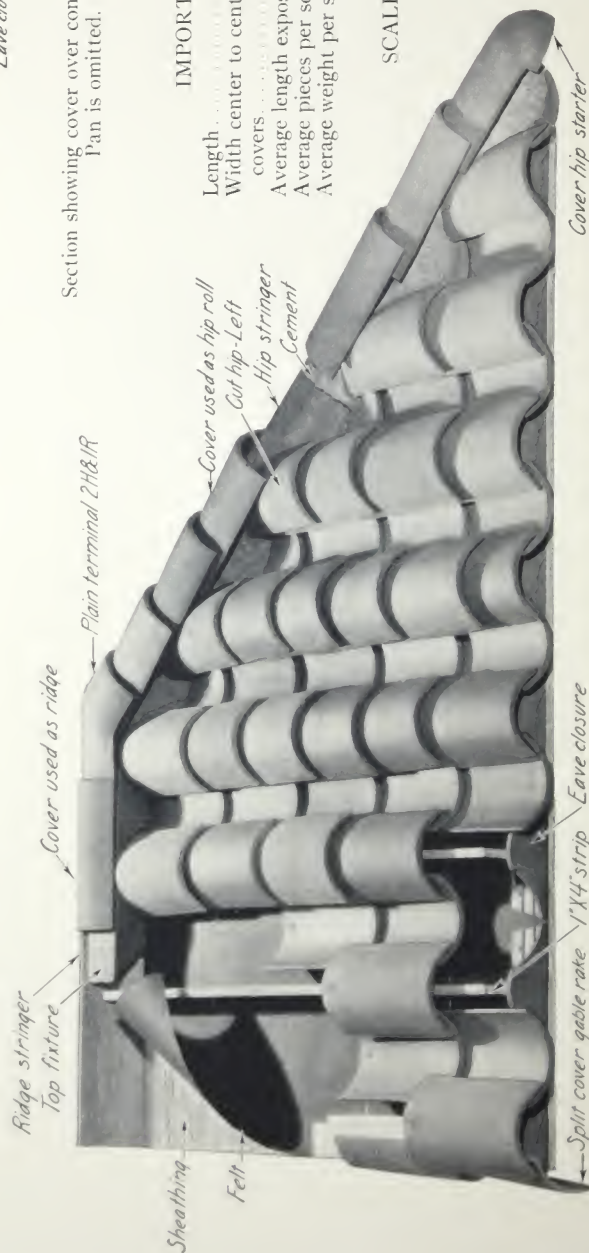
LUDOWICI-CELADON COMPANY



Section showing split cover gable rake, also flashing under side of tiles.



Section showing cover over concealed gutter.
Pan is omitted.

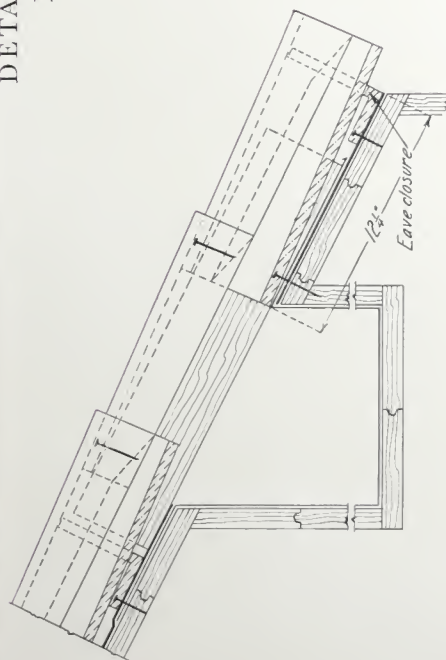


IMPORTANT DATA

Length.....	14 1/4".....	18"
Width center to center of covers.....	11 1/2".....	11 1/2"
Average length exposure.....	11 1/4".....	15"
Average pieces per square.....	224.....	170
Average weight per square.....	1250 lbs.....	1250 lbs.

SCALE 1 1/2" = 1'-0"

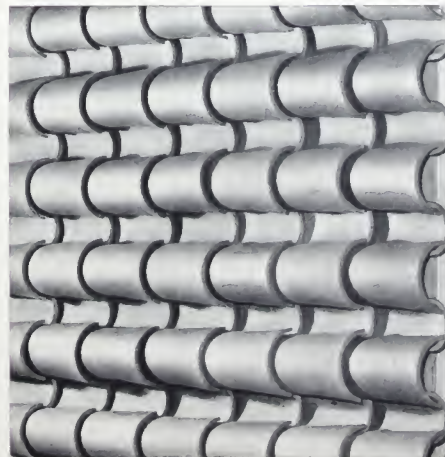
DETAILS OF IMPERIAL SMALL TAPERED MISSION TILES AND FITTINGS



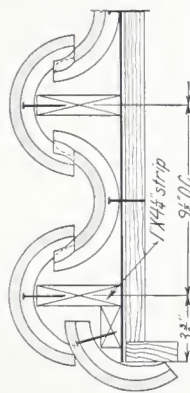
Section showing cover over concealed gutter. Pan is omitted.

IMPORTANT DATA	
SMALL TAPERED PANS AND COVERS	
Length	14 1/4"
Width center to center of covers	9 1/2"
Average length exposure	11 1/4"
Average pieces per square	270
Average weight per square	1380 lbs.
SMALL TAPERED COVERS AND 14 1/4" STRAIGHT BARREL PANS	
Length, pan	14 1/4"
Length, cover	14 1/4"
Width center to center of covers	10"
Average length exposure, pans	11 1/4"
Average length exposure, covers	11 1/4"
Average pieces per square, pans	128
Average weight per square, covers	1350 lbs.

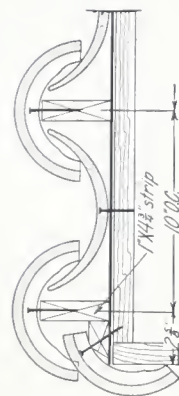
SCALE 1 1/2" = 1'-0"



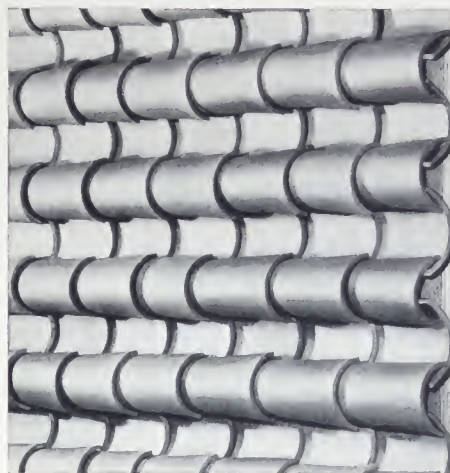
Small Tapered pans and covers.



Section showing Small Tapered pans and covers, also split cover gable rake.



Section showing Small Tapered covers with 14 1/4" Straight Barrel pans, also split cover gable rake.



Small Tapered covers and Straight Barrel pans.

DETAILS OF IMPERIAL ROMAN AND GREEK TILES



IMPORTANT DATA

ROMAN	
Length	12 3/4"
Width center to center of covers	12"
Average length exposure	10"
Average pieces per square	240
Average weight per square	1100 lbs.
GREEK	
Length	12 3/4"
Width center to center of covers	12"
Average length exposure	10"
Average pieces per square	240
Average weight per square	1250 lbs.

CORRECT RAFTER LENGTHS FOR FULL LENGTH ROMAN OR GREEK TILES

Based on 2" projection at eave of roof.

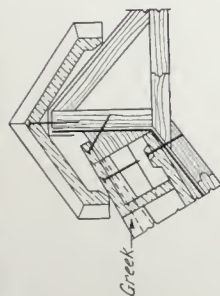
COVER	RAFTER
1	10 1/2"
2	20 1/2"
3	30 1/2"
4	40 1/2"
5	50 1/2"
6	60 1/2"
7	70 1/2"
8	80 1/2"
9	90 1/2"
10	100 1/2"
11	110 1/2"

HIP AND RIDGE STRINGER HEIGHTS

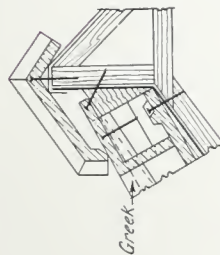
ROOF PITCH	ROMAN		GREEK	
	Hip No. 102	Ridge No. 206	Hip-Cover	Ridge No. 211
4" Rise to 12" Run	6 1/2"	7 1/2"	7"	6"
5" Rise to 12" Run	6 1/4"	7"	7"	5 3/4"
6" Rise to 12" Run	6 1/2"	6 3/4"	7"	5 1/2"
7" Rise to 12" Run	6 1/2"	6 1/2"	6 3/4"	5 1/4"
8" Rise to 12" Run	6 1/2"	6 1/2"	6 1/2"	5 1/8"
9" Rise to 12" Run	6 1/2"	6"	6 1/2"	5"
10" Rise to 12" Run	6 1/2"	6"	6 1/2"	4 7/8"
11" Rise to 12" Run	6 1/2"	5 3/4"	6 1/2"	4 3/4"
12" Rise to 12" Run	6"	5 3/4"	6 1/2"	4 1/2"
13" Rise to 12" Run	6"	5 1/2"	6 1/2"	4 1/4"
14" Rise to 12" Run	6"	5 1/2"	6 1/2"	4 1/8"

DETAILS OF IMPERIAL ROMAN AND GREEK TILES AND FITTINGS

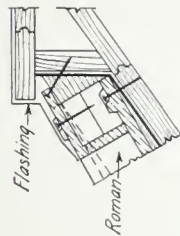
SCALE $1\frac{1}{2}" = 1'-0"$



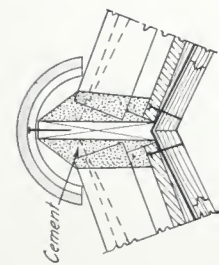
Deck section showing
No. 211 ridge.



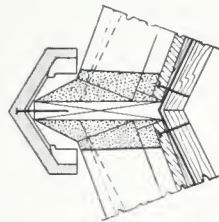
Deck section showing
No. 211 cut-off ridge.



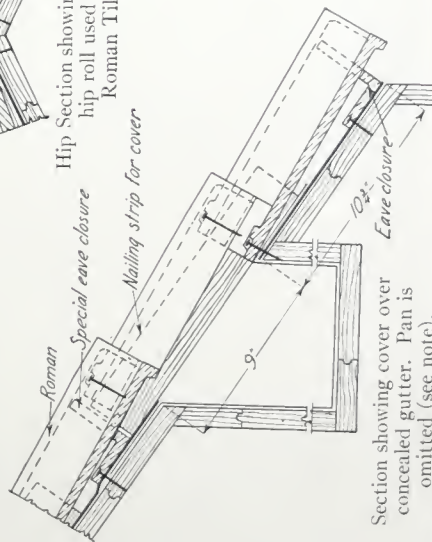
Deck section showing
flashing over top of
tiles (see note).



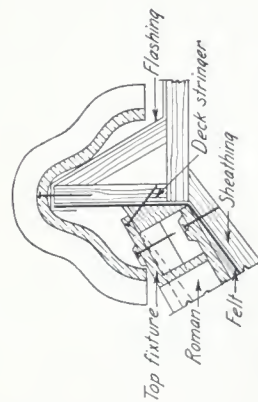
Hip Section showing No. 102
hip roll used with
Roman Tiles.



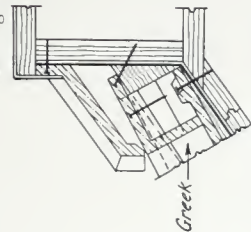
Hip section showing
Greek cover used as hip
roll with Greek Tiles.



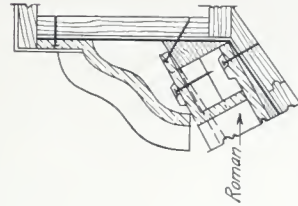
Section showing cover over
concealed gutter. Pan is
omitted (see note).



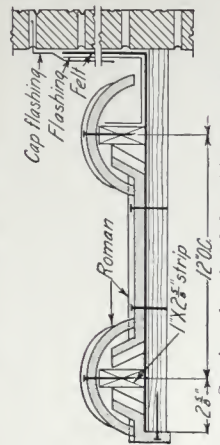
Deck section showing No. 206 ridge.



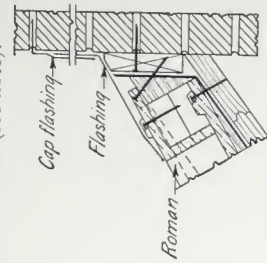
Deck section showing
No. 211 deck mould-
raised flange.



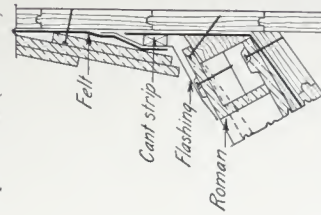
Deck section showing
No. 206 deck mould-
raised flange.



Section showing left gable rake,
also
flashing under side of tiles (see note).



Section showing flashing
over top of tiles (see note).



Section showing flash-
ing under $\frac{3}{4}"$ Flat Shin-
gle Tiles (see note).

NOTE: Gable, flashing, flush deck and gutter
treatments for Greek are the same as detailed
for Roman Tiles.



LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

TILE SLABS



In addition to shale red colors, tile slabs are manufactured in a range of browns and fire-flashed shades. A complete line of tile slab fittings is available.

NUMBER OF PIECES PER SQUARE

Mortar Joint	6"x6"x1"	6"x9"x1"	9"x9"x1"
1/8"	384	258	173
1/4"	369	250	168
3/8"	355	241	164
1/2"	341	234	160



6"x9"x1"



6"x6"x1"



GARDEN WALK EDGING

Made in red, fire-flashed and black. Placed in the ground along walks or driveways it makes an interesting and practical edging for lawns or flower borders.

TILE FLAGGING

Made in a variety of colors. The texture suggests that of old stone flagging. Size approximately 9"x12"x1 1/4".



PRINTED IN U.S.A.

ROOFING-TILES, CLAY, IMPERIAL
LUDOWICI-CELADON COMPANY

A. A. FINE NUMBER 12-61

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Chimney Pots

CHICAGO, 104 South Michigan Avenue

NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

CHIMNEY POTS

Chimney pots are made in various textures and colors especially adapted to use with our weathered effect tiles. They are also available in glazed colors for the modern treatment.



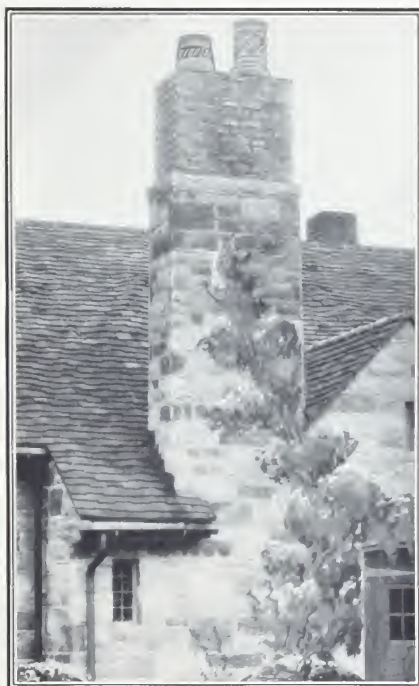
C.P. 200



C.P. 500, 510 and 520



C.P. 600, 610, 620, 630,
640, 650 and 660



C.P. 400, 410 and 420



C.P. 300, 310 and 320

SCHEDULE OF SIZES

NUMBER	FLUE	BASE	HEIGHT
C.P. 200	7½" x 7½"	13" x 13"	15"
C.P. 300	8" Dia.	14"	18"
C.P. 310	12" Dia.	18"	21"
C.P. 320	15" Dia.	21"	25"
C.P. 400	8" Dia.	14½"	25"
C.P. 410	12" Dia.	18½"	29"
C.P. 420	15" Dia.	21"	32"
C.P. 500	8" Dia.	14"	15"
C.P. 510	12" Dia.	18"	18"
C.P. 520	15" Dia.	21"	22"
C.P. 600	10" Dia.	13"	15"
C.P. 610	12" Dia.	15"	18"
C.P. 620	15" Dia.	18"	20"
C.P. 630	18" Dia.	21½"	23"
C.P. 640	23" Dia.	26"	30"
*C.P. 650	8" x 12"	11" x 15"	20"
*C.P. 660	12" x 17"	15" x 20"	30"

*Elliptical



LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Floor Tiles

CHICAGO, 104 South Michigan Avenue

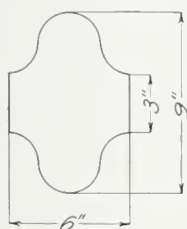
NEW YORK, 565 Fifth Avenue

WASHINGTON, 738 Fifteenth Street, N. W.

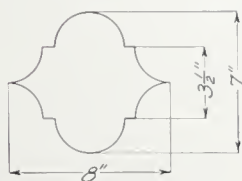
Factories located at NEW LEXINGTON, OHIO—COFFEYVILLE, KANSAS—PERU, KANSAS

FLOOR TILES

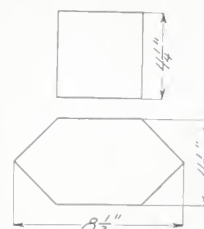
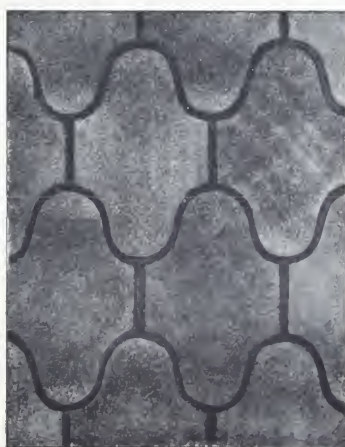
These shapes, in colors and textures originally manufactured for individual work of certain architects from their own designs, are now produced in quantities allowing their more general use. They are moderately priced.



Provence



Valencia



Renaissance

PIECES PER SQUARE FOOT

Based on 1/4" mortar joint.

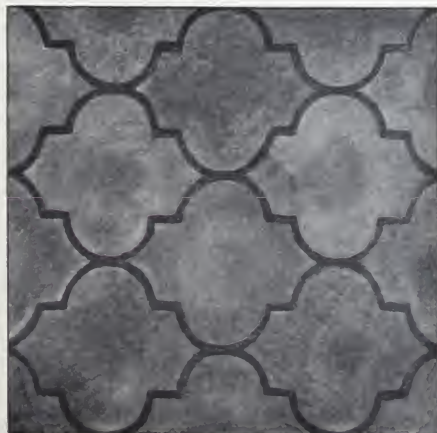
Provence, 3.86

Valencia, 4.28

*Renaissance, squares, 1.88

*Renaissance, hexagons, 3.76

*Based on design showing square surrounded by hexagons.



LUDOWICI-CELADON COMPANY

Makers of "Ludowici" Roofing Tiles

NEW YORK, N. Y.
CLEVELAND, OHIO

104 South Michigan Avenue
CHICAGO, ILL.

WASHINGTON, D. C.
OKLAHOMA CITY, OKLA.

AUTHENTIC IN EVERY DETAIL, LUDOWICI TILES FAITHFULLY REPRODUCE THE EFFECT OF OLD WORLD ROOFS

Products

LUDOWICI ROOFING TILES.
LUDOWICI CHIMNEY POTS.
LUDOWICI GARDEN WALK EDGING.
LUDOWICI TILE SLABS.
LUDOWICI TILE FLAGGING.

Manufacture

From the Ludowici clay pits of Ohio and Kansas come the finest clays obtainable. These clays, under our special manufacturing methods, produce hard-burned roofing tiles of non-reflective texture, whose soft, rich colors are obtained in the burning process—hence are permanent.

Texture

Ludowici Shingle Tile reproduce with historic accuracy the crude, rugged charm of the French farmhouse and the English countryside roofs, and give the required feeling of weight your design demands. The Colonial shingles reproduce in every detail the texture and color of old, hand-split wood shingles.

Closed Shingle, English Shingle, Mission, Spanish, Roman, Italian, and Greek tiles are also produced in various textures, including weathered surface effects.

Variations in great number, both as to color and texture can be had to meet the individual requirements of architectural design and taste.



Colors

Ludowici Shingle tiles are produced in a wide variety of colors, ranging from light tans and buffs through varying reds, browns and purples, to greys, brownish blacks and dark weathered greens.

Ludowici Spanish, Mission, French, English Shingle, Closed Shingle, Roman, Italian, and Greek tiles are offered in natural reds and fireflashed shades, or glazes of most any color.

Permanence and Durability

A roof of Ludowici tiles will last as long as the building it covers. Once laid, it provides a permanently beautiful, weathertight and fireproof roof, with distinct insulating qualities; assures lifelong protection without the expense of painting or repairs.

Reasonable in Cost

A Ludowici tile roof is moderate in price, and can be installed without any special framing for the substructure.

Service to Architects

We invite you to write or call your nearest Ludowici representative for samples of tile, complete specifications, and for aid on any roofing problem you may have. Estimates promptly furnished from architects' complete plans and specifications.

Provincial Shingle



Size 7 1/4" x 15" x 1/2"
Exposure 7 1/4" x 6 1/4"
296 pieces per sq.
Average weight per square, 1300 lbs.

Brittany Shingle



Size 7" x 12" x 3/4"
Exposure 7" x 5"
412 pieces per sq.
Average weight per square, 1650 lbs.

Antique Shingle



Size 7" x 12" x 3/4"
Exposure 7" x 5"
412 pieces per sq.
Average weight per square, 1525 lbs.

Colonial Shingle



Size 7" x 15" x 3/4"
Exposure 7" x 6 1/4"
317 pieces per sq.
Average weight per square, 1600 lbs.

ROOFING-TILES, CLAY, IMPERIAL
LUDOWICI-CELADON COMPANY
A. A. FILE NUMBER 12-1

LUDOWICI-CELADON COMPANY

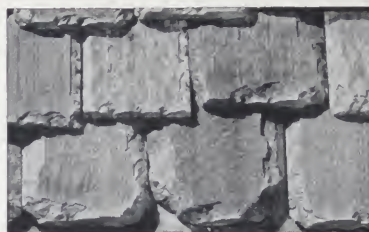
Norman Shingle

Size 7" x 12" x 1 1/2"
Exposure 7" x 5"
410 pieces per sq.
Average weight per
square, 1380 lbs.



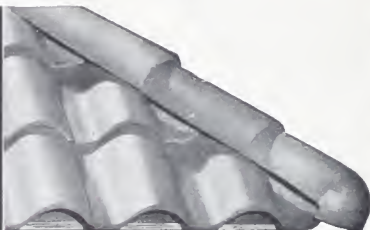
Yale Memorial Tile

Standard Sizes:
Lengths 12", 14", 16"
Widths 6", 7", 8",
Thicknesses 3/4",
1", 1 1/4". Exposure
and weight varies
according to the
size of tile used.



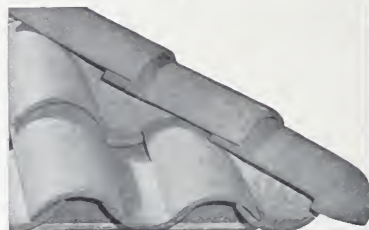
Spanish

Size 13 1/4" x 9 3/4"
Exposure 10 3/4" x 8 3/4"
171 pieces per sq.
Average weight per
square, 850 lbs.



Straight Barrel Mission

Lengths, 18", 14 1/4"
Exposures 15" x 11 3/4"
and 11 3/4" x 11 3/4".
18" length 166 pieces
per sq. Wt. 1200
lbs. 14 1/4" length
224 pieces per sq.
Weight, 1225 lbs.



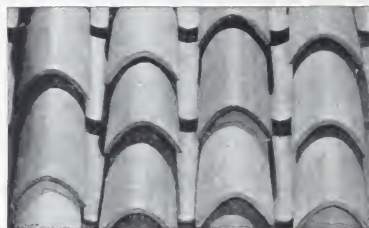
Cubana Tapered Mission

Size 18" x 11 1/4"
Exposure 15" x 11 1/4"
170 pieces per sq.
Average weight per
square, 1300 lbs.
18" Straight Barrel
Mission Pans.



18-in. Tapered Mission

Size 18" x 10"
Exposure 15" x 10"
192 pieces per sq.
Average weight per
square, 1300 lbs.
18" Straight Barrel
Mission Pans.



Roman



Made in two sizes: 10" x 12" exposure, 240 pieces
per sq.; 15" x 19" exposure, 102 pieces per sq.
Wt., small size, 1150 lbs.; large size, 1400 lbs.

Greek



Made in two sizes: 10" x 12" exposure, 240 pieces
per sq.; 15" x 19" exposure, 102 pieces per sq.
Wt., small size, 1285 lbs.; large size, 1450 lbs.

Italian



Size of tile width 11 1/4" x length 12 1/4".
Exposure 9 1/4" x 11 1/4", 276 pieces per square.
Average weight per square is 1350 pounds.

LUDOWICI CHIMNEY POTS FOR USE WITH WEATHERED-EFFECT TILES

Chimney pots are made to fit standard flue
linings. They are available in various textures
and colors, with glazed or unglazed finish.



C.P. 200



C.P. 300, 310, 320

STANDARD STOCK SIZES			
NUMBER	FLUE	BASE	HEIGHT
C.P. 200	7 1/2" x 7 1/2"	13" x 13"	15"
C.P. 300	8" Diam.	14"	18"
C.P. 310	12" Diam.	18"	21"
C.P. 320	15" Diam.	21"	25"
C.P. 400	8" Diam.	14 1/2"	25"
C.P. 410	12" Diam.	18 1/2"	29"
C.P. 420	15" Diam.	21"	32"
C.P. 500	8" Diam.	14"	15"
C.P. 510	12" Diam.	18"	18"
C.P. 520	15" Diam.	21"	22"
C.P. 600	10" Diam.	13"	15"
C.P. 610	12" Diam.	15"	18"
C.P. 620	15" Diam.	18"	20"
C.P. 630	18" Diam.	21 1/2"	23"
C.P. 640	23" Diam.	26"	30"
C.P. 650	8" x 12"	11" x 15"	20"
*C.P. 660	12" x 17"	15" x 20"	30"

*Elliptical.



C.P. 400, 410, 420



C.P. 500, 510, 520



C.P. 600, 610, 620,
630, 640, 650, 660

ROOFING-TILES, CLAY, IMPERIAL
LUDOWICI-CELADON COMPANY

A. I. A. FILE NUMBER 12-61

520

0. 620,
0. 660

S. A.

